

Storm Data and Unusual Weather Phenomena - January 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z056) SAUK, (WI-Z058) DODGE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK				
	01/07/10 00:00 CST	0		Winter Storm
	01/08/10 00:00 CST	0		
<p>The only January 2010 winter storm of any consequence produced periods of moderate to heavy snow across most of south-central and southeast Wisconsin on January 7th. Total snow accumulations were mostly in the 6 to 12 inch range. This storm was the result of strong forcing associated with a vigorous upper-low that tracked from central Iowa to east-central Illinois and then eastward. The storm had brisk northeast surface winds of 13 to 17 knots (15 to 20 mph) with gusts to 26 knots (30 mph) as the associated surface low deepened across north-central Illinois. This provided the low-level winds a long fetch over the relatively warmer open waters of Lake Michigan. Additionally, steep lapse rates and lake-induced CAPE between 250 and 280 J/kg, produced lake-effect snow bands that enhanced snow accumulations near the lake. Some wind gusts to 30 to 39 knots (35 to 45 mph) were reported along the Lake Michigan shoreline, resulting in snow drifts of 1 to 3 feet in height. Numerous vehicle spin-outs and accidents were reported across south-central and southeast Wisconsin. At least two people were hospitalized due to serious injuries suffered in vehicle accidents: one in Salem (Kenosha Co.) and the other one in the Town of Lyndon (Sheboygan Co.). Both are considered indirect injuries.</p> <p>Maximum snow amounts in each county included 13.1" in Germantown (Washington Co.), 12.5" in Sturtevant (Racine Co.), 10.2" in Big Bend (Waukesha Co.), 10" in Elkhart Lake (Sheboygan Co.) and West Allis (Milwaukee Co.), 9.4" in Port Washington (Ozaukee Co.), 9.2" in Reedsburg (Sauk Co.), 8.6" in Horicon (Dodge Co.), 8.5" in Dodgeville (Iowa Co.) and Paddock Lake (Kenosha Co.), 8.4" in Argyle (Lafayette Co.), an estimated 8" in far west-central Green County and far east-central Walworth County, 7.9" in Milton (Rock Co.), an estimated 7.5" in far southwest Dane County, 7" in Watertown (Jefferson Co.) and Ashford (Fond du Lac Co.).</p>				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z057) COLUMBIA				
	01/07/10 00:00 CST	0		Winter Weather
	01/08/10 00:00 CST	0		
<p>The winter storm that produced periods of moderate to heavy snow across most of south-central and southeast Wisconsin on January 7th, brought snow accumulations of 4 to 7 inches to portions of northern south-central Wisconsin. This storm was the result of strong forcing associated with a vigorous upper-low that tracked from central Iowa to east-central Illinois and then eastward. The storm had brisk northeast surface winds of 13 to 17 knots (15 to 20 mph) with gusts to 26 knots (30 mph) as the associated surface low deepened across north-central Illinois. Numerous vehicle spin-outs and accidents were reported across south-central and southeast Wisconsin.</p> <p>Maximum snow amounts in each county included 8.1" in Columbus (Columbia Co.) which fell over a greater than 24-hour period, 5.2" in Green Lake (Green Lake Co.) and 4.0" in Montello (Marquette Co.).</p>				
(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	01/07/10 04:00 CST	0		Winter Storm
	01/08/10 03:00 CST	0		
<p>The only January 2010 winter storm of any consequence produced periods of moderate to heavy snow across most of south-central and southeast Wisconsin on January 7th. Total snow accumulations were mostly in the 6 to 12 inch range. This storm was the result of strong forcing associated with a vigorous upper-low that tracked from central Iowa to east-central Illinois and then eastward. The storm had brisk northeast surface winds of 13 to 17 knots (15 to 20 mph) with gusts to 26 knots (30 mph) as the associated surface low deepened across north-central Illinois. This provided the low-level winds a long fetch over the relatively warmer open waters of Lake Michigan. Additionally, steep lapse rates and lake-induced CAPE between 250 and 280 J/kg, produced lake-effect snow bands that enhanced snow accumulations near the lake. Some wind gusts to 30 to 39 knots (35 to 45 mph) were reported along the Lake Michigan shoreline, resulting in snow drifts of 1 to 3 feet in height. Numerous vehicle spin-outs and accidents were reported across south-central and southeast Wisconsin. At least two people were hospitalized due to serious injuries suffered in vehicle accidents: one in Salem (Kenosha Co.) and the other one in the Town of Lyndon (Sheboygan Co.). Both are considered indirect injuries.</p> <p>Maximum snow amounts in each county included 13.1" in Germantown (Washington Co.), 12.5" in Sturtevant (Racine Co.), 10.2" in Big Bend (Waukesha Co.), 10" in Elkhart Lake (Sheboygan Co.) and West Allis (Milwaukee Co.), 9.4" in Port Washington (Ozaukee Co.), 9.2" in Reedsburg (Sauk Co.), 8.6" in Horicon (Dodge Co.), 8.5" in Dodgeville (Iowa Co.) and Paddock Lake (Kenosha Co.), 8.4" in Argyle (Lafayette Co.), an estimated 8" in far west-central Green County and far east-central Walworth County, 7.9" in Milton (Rock Co.), an estimated 7.5" in far southwest Dane County, 7" in Watertown (Jefferson Co.) and Ashford (Fond du Lac Co.).</p>				
(WI-Z058) DODGE				
	01/19/10 10:00 CST	0		Dense Fog
	01/19/10 16:00 CST	0		

Storm Data and Unusual Weather Phenomena - January 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Surface high pressure building into Wisconsin brought clear skies and light winds to most of the state during the morning hours of January 19th. These conditions were favorable for the formation of dense fog across portions of southern Wisconsin. While dense fog was more widespread in southwest Wisconsin, there were pockets of dense fog over southeast and south-central Wisconsin.

One area of dense fog over southern Fond Du Lac County into central Dodge County contributed to an accident about 2 miles west of Waupun involving a car and a farm tractor pulling a wagon. The 56-year-old male driver of the car was killed in the accident. The Fond Du Lac County Sheriff's department, in a newspaper report about the accident, said low visibility contributed to the accident, but made no mention of freezing conditions being a factor. At the time of the accident, around 815 am CST, the Juneau Airport observation reported visibility of less than 1/4 mile in dense fog.

Storm Data and Unusual Weather Phenomena - February 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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WISCONSIN, Southeast

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH

02/08/10 18:00 CST	0	Winter Weather
02/10/10 00:00 CST	0	

A clipper-type low pressure system passing to the southwest and south of Wisconsin resulted in widespread snow across southern Wisconsin. A second low that had moved northeastward from Texas merged with the clipper system over western Ohio and deepened. This resulted in increasing northeast winds...and with a favorable fetch down Lake Michigan...produced lake enhanced snow that boosted snow totals over eastern Wisconsin.

South Central Wisconsin and a portion of Southeast Wisconsin received widespread 4 to 7 inches of snow...with 8 to 14 inches in southeast Wisconsin. Snow totals of 5 to 9 inches fell west of a line from western Fond Du Lac County near Ripon...through Hartford in Washington County...the city of Waukesha in Waukesha County...Union Grove in western Racine County to Silver Lake in western Kenosha County. The highest snow total from the advisory area was 7.3 inches from an observer 1 mile south of Mt. Horeb in Dane County...with 7 inches reported from observers in Sauk...Lafayette...Jefferson and Rock Counties...and 6.6 inches in East Troy in Walworth County.

Over 250 traffic crashes, spin-outs and collisions were reported. A tanker truck that rolled over in the westbound lanes of Interstate 39/90 near Edgerton in Rock County blocked the interstate with traffic detoured onto U.S. Highway 14.

(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/09/10 00:00 CST	0	Winter Storm
02/10/10 01:30 CST	0	

A clipper-type low pressure system passing to the southwest and south of Wisconsin resulted in widespread snow across southern Wisconsin. A second low that had moved northeastward from Texas merged with the clipper system over western Ohio and deepened. This resulted in increasing northeast winds...and with a favorable fetch down Lake Michigan...produced lake enhanced snow that boosted snow totals over eastern Wisconsin.

South Central Wisconsin received widespread 4 to 7 inches of snow...with 8 to 14 inches in southeast Wisconsin. The heaviest snow of 10 to 14 inches fell along and east of a line from northwest Sheboygan County near Elkhart Lake...through Hartford in Washington County...the city of Waukesha in Waukesha County...Union Grove in western Racine County to Silver Lake in western Kenosha County. The highest snow total from the storm was 15.0 inches from an observer 1 mile northwest of Belgium in Ozaukee County...with 13.7 inches from an observer 4 miles southwest of Muskego in Waukesha County...13.4 inches in West Allis in Milwaukee County...13.3 inches reported by an observer 6 miles northwest of the city of Kenosha...and 13.1 inches at Hingham in Sheboygan County.

Over 250 traffic crashes, spin-outs and collisions were reported. A tanker truck that rolled over in the westbound lanes of Interstate 39/90 near Edgerton in Rock County blocked the interstate with traffic detoured onto U.S. Highway 14.

One fatality related to the storm occurred in Milwaukee County, where a 73-year old man with a history of heart problems died shortly after shoveling snow.

(WI-Z066) MILWAUKEE, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/24/10 12:00 CST	0	Winter Weather
02/24/10 23:00 CST	0	

An upper level low crossing the Great Lakes region developed an associated surface low that moved over southern portions of Lake Michigan. Low level convergence combined with steep mid level lapse rates to produce persistent lake-effect bands of snow that moved south along the western shores of Lake Michigan.

The lake-effect snow totaled 3 to 5 inches from Milwaukee County south through eastern portions of Racine and Kenosha counties. The highest amount reported was 4.5 inches in Kenosha...with 4.2 inches 4 miles southwest of Kenosha...and 4.0 inches in West Allis in Milwaukee County.

Storm Data and Unusual Weather Phenomena - March 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z059) WASHINGTON				
	03/03/10 03:00 CST	1	0	Cold/Wind Chill
	03/03/10 08:00 CST		0	
Direct Fatalities: M58OU				
<p>Colder than normal early March weather in southeastern Wisconsin played a role in a hypothermia death of a man in the West Bend area of Washington County. The man was found frozen on the ground outside his residence during the early morning hours of March 3rd with air temperatures in the teens and a light northwest wind of 3 to 5 knots (3 to 6 mph). Normal lows at this time of the year are around 22. The previous day's maximum temperatures were around 32, which was about 5 degrees below normal. The medical examiner indicated that although hypothermia was the direct cause of death, this individual also had a heart valve problem and a fatty liver.</p>				
(WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	03/07/10 23:00 CST		0	Dense Fog
	03/08/10 11:00 CST		0	
<p>Clearing skies, calm wind, and recent rain and snowmelt resulted in a classic dense fog episode across parts of south-central and southeast Wisconsin. Visibilities dropped to several hundreds of yards to less than 1/4 mile. Several airplane flights were delayed at airports. Newspaper reports indicated that several vehicle accidents occurred.</p>				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE				
	03/10/10 09:00 CST		0	Dense Fog
	03/13/10 03:00 CST		0	
<p>Several periods of dense fog affected south-central and southeast Wisconsin for 2 to 3 days thanks to recent rains and snowmelt saturating the lower atmosphere. At times visibilities were reduced to 1/16 of a mile or less, and in some cases down to 50 to 100 feet. Some vehicle drivers indicated that driving through the fog was downright scary or dangerous. A good number of airplane flights were delayed, and some were canceled, at the larger airports. One spotter 5 miles southeast of downtown Madison (Dane Co.) noted that the visibility was the worst he has seen in many years and he could barely see 2 or 3 houses away. Newspaper reports indicated that several vehicle accidents occurred.</p>				
(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	03/10/10 09:00 CST		0	Dense Fog
	03/12/10 02:00 CST		0	
<p>Several periods of dense fog affected south-central and southeast Wisconsin for 2 to 3 days thanks to recent rains and snowmelt saturating the lower atmosphere. At times visibilities were reduced to 1/16 of a mile or less, and in some cases down to 50 to 100 feet. Some vehicle drivers indicated that driving through the fog was downright scary or dangerous. A good number of airplane flights were delayed, and some were canceled, at the larger airports. One spotter 5 miles southeast of downtown Madison (Dane Co.) noted that the visibility was the worst he has seen in many years and he could barely see 2 or 3 houses away. Newspaper reports indicated that several vehicle accidents occurred.</p>				
(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	03/19/10 20:00 CST		0	Winter Weather
	03/20/10 16:00 CST		0	
<p>A typical winter weather event deposited 1 to 4 inches of snow across southern Wisconsin overnight March 19th into the morning hours of March 20th. The snow had a snow:water ratio of 10 to 1 to 12 to 1. Although not much of the snow accumulated on road surfaces it did accumulate and become icy on bridges and highway overpasses. This led to several vehicle accidents. One bridge on Interstate 39-90 about 6 miles south of Janesville became very icy by 0530 CST on March 20th. This resulted in 3 separate vehicle accidents within 20 minutes. A total of seven (7) people were injured, and after the 3rd accident the Interstate was closed for 90 minutes and traffic detoured. The snow was a result of a band of convergence over Wisconsin in the mid-level of the atmosphere which squeezed out what moisture was left in the wake of a departing cold front.</p>				

Storm Data and Unusual Weather Phenomena - March 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Storm Data and Unusual Weather Phenomena - April 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	04/05/10 21:30 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	04/05/10 21:30 CST		0	Source: C-MAN Station
An isolated but strong thunderstorm moved over the nearshore waters of Lake Michigan producing isolated strong wind gusts.				
PT WASHINGTON TO NORTH PT LT WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	04/06/10 20:30 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	04/06/10 20:30 CST		0	Source: C-MAN Station
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	04/06/10 20:57 CST		0	Marine Thunderstorm Wind (MG 35 kt)
	04/06/10 20:57 CST		0	Source: C-MAN Station
A small line of strong thunderstorms affected the nearshore waters of Lake Michigan from Sheboygan to north of North Point Lighthouse, caused thunderstorm wind gusts greater than 33 knots.				
WISCONSIN, Southeast				
(WI-Z069) ROCK				
	04/02/10 09:00 CST		1K	Strong Wind (MAX 43 kt)
	04/02/10 16:00 CST	1	0	
Strong southwest winds, gusting to an estimated 43 knots (50 mph) pushed a motorcycle over at the intersection on Interstate 39/90 and Hart Rd. The diver was injured, and his cycle sustained minor damage. This occurred about 4 miles northeast of Beloit. The winds about 5000 feet above ground level were about 40 to 50 knots at the time of the accident. Daytime heating and mixing of the lower atmosphere allowed some of the higher momentum air to mix down to the surface.				
LAFAYETTE COUNTY --- SHULLSBURG [42.57, -90.23]				
	04/05/10 22:20 CST		0	Hail (0.88 in)
	04/05/10 22:20 CST		0	Source: Fire Department/Rescue
Shullsburg Fire Dept. reported 7/8" hail.				
DODGE COUNTY --- REESEVILLE [43.30, -88.83]				
	04/06/10 19:55 CST		0	Hail (0.75 in)
	04/06/10 19:55 CST		0	Source: Law Enforcement
Law enforcement reported 3/4" hail.				
DODGE COUNTY --- LOWELL [43.33, -88.80]				
	04/06/10 19:59 CST		0	Hail (0.88 in)
	04/06/10 19:59 CST		0	Source: Trained Spotter
A trained spotter reported 7/8" hail.				
A complex synoptic environment set up in southern Wisconsin during the overnight hours and early morning of 5-6 April. A warm front stalled just south of the Wisconsin-Illinois border. Overnight on 5 April, elevated convection was driven by a vigorous LLJ bringing a significant risk of damaging hail and strong winds. During the morning of 6 April, remnants of an MCS tracked over the same southern area of Wisconsin bringing another round of strong thunderstorms just north of the surface warm front. Finally, during the evening, deep shear and elevated instability lead to an narrow corridor in which strong thunderstorms were able to develop and race across southern Wisconsin yet again. The main threats were large hail and strong winds.				
GREEN LAKE COUNTY --- 2.0 N GREEN LAKE [43.86, -88.95]				
	04/30/10 18:00 CST		0	Hail (1.00 in)
	04/30/10 18:00 CST		0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - April 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
GREEN LAKE COUNTY --- 3.3 SSE BERLIN [43.92, -88.91], 2.5 SE BERLIN [43.95, -88.89]				
	04/30/10 18:00 CST		0.13M	Tornado (EF1, L: 2.00 mi , W: 100 yd)
	04/30/10 18:02 CST		0	Source: Emergency Manager
A weak tornado spun up southeast of Berlin near the intersection of CTH AA and Forest Ridge Rd. The tornado moved northeast and dissipated near the intersection of CTH V and White Ridge Rd. The average path width was 60 yards. A damage survey noted seven high tension wood power poles were snapped. A few trees were uprooted including one that fell on and damaged a car. There was minor roof damage to a barn. Several small barrels were thrown over 100 yards into a nearby field. A portable toilet was moved about 50 feet. Near the end of the track, a TV antenna was snapped and there was damage to the facade of a home. A small shed was destroyed and a couch that was outdoors was thrown about 75 feet. The Green Lake County Emergency Manager estimated property damage at \$30,000. Additionally, it is estimated that the power-pole and line replacement cost was about \$100,000.				
MARQUETTE COUNTY --- 2.0 SE GLENOAK [43.73, -89.30], 4.3 E GLENOAK [43.76, -89.25]				
	04/30/10 18:15 CST		0	Tornado (EF0, L: 2.97 mi , W: 50 yd)
	04/30/10 18:19 CST		0	Source: NWS Storm Survey
This weak tornado had 3 segments - Marquette County, Green Lake County, and a final path back in Marquette County. The first segment, described here, spun up southeast of Glen Oak near the intersection of Hwy 22 and 16th Ct., and moved northeast. Several trees had broken branches or were partially uprooted. The damage indicator used to rate this segment was: DI 27 (TH), DOD 3, 75-80 mph. This tornado exited Marquette County and went into Green Lake County, about a mile north of where the Fox River exits Marquette County. The average path width was 30 yards. The responsible thunderstorm was the northern of two parallel-moving thunderstorms with embedded circulations. Refer to the Green Lake County segment extension and the final segment that occurred in Marquette County. This tornado ultimately ended at 1824 CST in Marquette County.				
MARQUETTE COUNTY --- 3.7 SE GLENOAK [43.71, -89.28], 4.5 ESE GLENOAK [43.73, -89.25]				
	04/30/10 18:15 CST		0	Tornado (EF0, L: 2.05 mi , W: 50 yd)
	04/30/10 18:17 CST		0	Source: NWS Storm Survey
This tornado segment is the 1st of a 2-segment, weak, tornado that spun up about 4 miles southeast of Glen Oak in Marquette County. It moved northeast into Green Lake County where it eventually dissipated on the north shore of Pukaway Lake. Specifically, it spun up about 1/2 mile southeast of the intersection of CTY B and 16th Rd. and exited Marquette County roughly 2 miles to the northeast in the middle of the Grand River. Several trees were damaged or partially uprooted. There was no other structural damage. The average path width was 35 yards. The EF0 rating was based on DI 27 (TH), and DOD 2, 65-70 mph, after a NWS survey. The responsible thunderstorm was the southern of two parallel-moving storms with weak circulations, each moving northeast. Refer to the second segment that continue into Green Lake County.				
GREEN LAKE COUNTY --- 5.8 NNW DALTON [43.73, -89.25], 5.3 SSW PRINCETON [43.77, -89.14]				
	04/30/10 18:17 CST		0	Tornado (EF0, L: 6.15 mi , W: 50 yd)
	04/30/10 18:23 CST		0	Source: NWS Storm Survey
This tornado segment in Green Lake County was the 2nd of a 2-segment tornado that started in Marquette County at 1815 CST. It entered Green Lake County about 6 miles northwest of Dalton at the mid-point of the wide part of the Grand River and continued to move northeast. It crossed Pukaway Lake and came ashore just east of the corner of Marquette County near a boat launch site. A few trees had broken branches or were partially uprooted. The average path width was 35 yards. The EF0 rating was based on DI 27 (TH), and DOD 2, 65-70 mph, after a NWS survey. The responsible thunderstorm was the southern of two parallel moving storms with embedded circulations. The northern storm also produced a weak tornado.				
GREEN LAKE COUNTY --- 7.5 WNW KINGSTON [43.76, -89.25], 7.2 NW KINGSTON [43.77, -89.23]				
	04/30/10 18:19 CST		0	Tornado (EF0, L: 1.10 mi , W: 50 yd)
	04/30/10 18:20 CST		0	Source: NWS Employee
This Green Lake County tornado segment was the 2nd of a 3-segment tornado that initially started in Marquette County. This Green Lake County segment started about 1 mile north of where the Fox River enters Green Lake County, and moved northeast. A survey of this segment was not possible due to swamp conditions along the path. However, this tornado was seen by people near Princeton in Green. It is assumed that there was minor vegetative damage along this 2nd segment. The average path width in this 2nd segment was estimated at 30 yards. The damage indicator used to rate this segment was: DI 27 (TH), DOD 3, 75-80 mph. This tornado exited Green Lake County over the far northwest corner of Pukaway Lake and re-entered Marquette County and eventually dissipated near Fern Dr. and 22nd Ln at 1824 CST. Refer to the two Marquette County segments for other details.				
MARQUETTE COUNTY --- 5.1 ESE MONTELLO [43.77, -89.23], 6.9 SSE GERMANIA [43.80, -89.18]				
	04/30/10 18:20 CST		0	Tornado (EF0, L: 3.18 mi , W: 50 yd)
	04/30/10 18:24 CST		0	Source: NWS Storm Survey
This Marquette County tornado segment was the 3rd of a 3-segment tornado that initially started in Marquette County at 1815 CST and then crossed Green Lake County and re-entered Marquette County. It re-entered just southwest of the intersection of CTH C and 20th Ct. and moved northeast. Several trees had broken branches or were partially uprooted. It ended near Fern Dr. and 22nd Ln at 1824 CST. The average path width in this 3rd segment was estimated at 30 yards. The damage indicator used to rate this segment was: DI 27 (TH), DOD 3, 75-80 mph. Refer to the associated Green Lake County and Marquette County segments for other details.				

Storm Data and Unusual Weather Phenomena - April 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Parts of southeast Wisconsin lay within the warm sector of a mid-latitude cyclone for much of the day with persistent southerly winds blowing ahead of a cold front draped from western Iowa through the Texas panhandle. As the front pushed across southwest Wisconsin, moderate CAPE and strong shear were present and two lines of thunderstorms developed, with the second of these lines producing three weak tornadoes. One inch diameter hail was also reported in association with the second line of thunderstorms.

Storm Data and Unusual Weather Phenomena - May 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	05/05/10 13:00 CST		0.24M	Strong Wind (MAX 45 kt)
	05/05/10 18:00 CST	3	0	
<p>Strong southwest to west winds affected all of south-central and southeast Wisconsin on May 5th. Maximum wind gusts were 39 to 45 knots (45 to 52 mph). Small trees were knocked down or tree limbs were broken. Some of these fell on power-lines resulting in scattered power outages, especially in the counties of Green Lake and Columbia. The strong winds were generated by a deepening low pressure over Lake Superior moving eastward. The atmosphere mixed all the way up to 8 to 10 thousand feet above the ground which allowed for the mixing down of higher momentum air to the surface. The strong winds affected the nearshore waters of Lake Michigan east of Sheboygan to Kenosha, but no damage was reported.</p> <p>Three Fitchburg (Dane Co.) police officers were injured (direct injury) when they were hit by an 8-foot-by-8-foot section of wall that was wind-blown off a trailer being used for training purposes. In the Township of Albion (southeast Dane Co.) a man-made debris fire got out of control when the wind pushed the flames onto a nearby barn. The barn and contents were a total loss. Inside the barn were stored 5 boats, 3 classic cars, farm machinery, and tools. The barn and contents loss (estimated at \$300,00) would be indirectly related to this strong wind event. Consequently, the \$300K in damage is not part of the \$240K in property damage listed in the header strip of this strong wind event. Elsewhere, it was assumed that there were at least a couple power-lines down in each county listed in this event (loss of \$10K), and damage amounts are estimated.</p>				
(WI-Z052) SHEBOYGAN, (WI-Z060) OZAUKEE, (WI-Z066) MILWAUKEE, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	05/21/10 08:00 CST		0	Dense Fog
	05/22/10 08:00 CST		0	
<p>Dense fog developed over southeast Wisconsin along the Lake Michigan thanks to a cool, moist southeast flow from over the lake. Light rain occurred prior to the dense fog. Visibilities were reduced to 1/8 to 1/4 mile. Airplane flights were delayed at Milwaukee Mitchell Field.</p>				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH				
	05/21/10 21:00 CST		0	Dense Fog
	05/22/10 08:00 CST		0	
<p>Dense fog developed over southeast Wisconsin along the Lake Michigan thanks to a cool, moist southeast flow from over the lake. Light rain occurred prior to the dense fog. Visibilities were reduced to 1/8 to 1/4 mile. Airplane flights were delayed at Madison Truax Field.</p>				
DANE COUNTY --- 2.0 W MADISON MOREY ARPT [43.12, -89.57]				
	05/25/10 07:45 CST		20K	Lightning
	05/25/10 07:45 CST		0	Source: Newspaper
Lightning struck a house and caused a fire.				
GREEN COUNTY --- ALBANY [42.70, -89.43]				
	05/25/10 14:28 CST		0	Thunderstorm Wind (EG 56 kt)
	05/25/10 14:28 CST		0	Source: Law Enforcement
<p>Powerful thunderstorm winds gusts to an estimated 65 mph downed several trees. Not related to this wind event, but in the Juda area water covered County Highway OK (only a few inches) southeast of Juda thanks to about 1.5 inches of rain in a short period of time. Just north of Brodhead water covered County Highway E (only a few inches) thanks to similar rainfall amount. No damage was reported, therefore no flood event was entered into Storm Data for Green County.</p>				
SHEBOYGAN COUNTY --- ELKHART LAKE [43.83, -88.02], 2.0 S ELKHART LAKE [43.80, -88.02]				
	05/26/10 17:05 CST		75K	Thunderstorm Wind (EG 65 kt)
	05/26/10 17:10 CST		0	Source: Emergency Manager

Storm Data and Unusual Weather Phenomena - May 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Powerful thunderstorm winds toppled about three dozen large trees and resultant tree debris knocked down at least a dozen to two dozen power-lines. About 800 customers lost electrical power, but by 2200 CST all power was restored. One light pole was knocked down at Lincoln St. and Rhine St. in the Elkhart Lake area. One tree fell onto an automobile at the Osthoff Resort near Elkhart Lake and damaged it.				

SHEBOYGAN COUNTY --- 0.9 E PLYMOUTH [43.75, -87.96]

05/26/10 17:41 CST	5K	Lightning
05/26/10 17:41 CST	0	Source: Newspaper

Lightning stuck an underground power cable in the 300 block of N. Highland Ave. in Plymouth. About 300 customers lost power for about 2.5 hours.

SHEBOYGAN COUNTY --- 2.8 WNW SHEBOYGAN CO MEM ARP [43.79, -87.90]

05/26/10 17:49 CST	20K	Lightning
05/26/10 17:49 CST	0	Source: Newspaper

Lightning struck and damaged an electrical overhead system on a line just south of the intersection of County Highways J and M. About 500 customers were without power for about 4 hours.

KENOSHA COUNTY --- 1.3 E PADDOCK LAKE [42.58, -88.09]

05/26/10 20:30 CST	15K	Lightning
05/26/10 20:30 CST	0	Source: Newspaper

A home in the Village of Salem experienced a smoldering fire in the attic after lightning struck nearby power lines and followed the lines into the house. The insulation on the home's electrical lines was burned off. The time of this event is estimated based on radar and forecast products tracking the thunderstorms that produced the lightning.

A weakly sheared environment with modest CAPE values and high precipitable water values lead to periods of slow-moving, yet relatively strong, thunderstorms to slowly drift southward over parts of south-central and southeast Wisconsin between the morning of 25 May and through the evening of 26 May. Main hazards with these storms were severe wind gusts and high rainfall rates.

ROCK COUNTY --- 5.0 NNE FOOTVILLE [42.74, -89.16]

05/31/10 02:45 CST	0	Hail (1.00 in)
05/31/10 02:45 CST	0	Source: Public

ROCK COUNTY --- MILTON [42.77, -88.95]

05/31/10 03:15 CST	0	Hail (1.00 in)
05/31/10 03:15 CST	0	Source: Law Enforcement

A large and intense thunderstorm formed out ahead of a cold front which extended from Port Washington (Ozaukee County) through eastern Jefferson County. The thunderstorm produced large hail in the early morning hours.

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	06/18/10 15:30 CST		0	Marine Thunderstorm Wind (MG 42 kt)
	06/18/10 15:30 CST		0	Source: C-MAN Station
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	06/18/10 16:00 CST		0	Marine Thunderstorm Wind (EG 35 kt)
	06/18/10 16:00 CST		0	Source: Trained Spotter
A line of severe thunderstorms moved across the Milwaukee Harbor and vicinity lakeshore area producing strong wind gusts. No damage was reported by multiple sources along the lakeshore.				
A squall line of severe thunderstorms moved east-northeast across far southern Wisconsin and the adjacent nearshore waters of Lake Michigan. The squall line showed bowing structure, which was an indicator of strong, damaging winds.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 3.6 E WIND POINT [42.78, -87.76]				
	06/21/10 21:15 CST		0	Marine Thunderstorm Wind (EG 43 kt)
	06/21/10 21:15 CST		0	Source: Public
Wind Point lighthouse keeper estimated wind gust of 43 knots with line of thunderstorms.				
NORTH PT LT TO WIND PT WI COUNTY --- 3.3 SE NORTH POINT LTHOUSE [43.04, -87.89]				
	06/21/10 21:20 CST		0	Marine Thunderstorm Wind (MG 46 kt)
	06/21/10 21:20 CST		0	Source: Mariner
Intense thunderstorms affected the Lake Michigan shoreline late in the evening on June 21st. These were the same thunderstorms that produced tornadoes and damaging downburst winds in south-central and southeast Wisconsin.				
WISCONSIN, Southeast				
SAUK COUNTY --- 2.5 W SAUK CITY [43.27, -89.78]				
	06/02/10 15:30 CST		0	Hail (1.00 in)
	06/02/10 15:30 CST		0	Source: Law Enforcement
DANE COUNTY --- 3.0 SSW NORTH BRISTOL [43.23, -89.23]				
	06/02/10 16:20 CST		30K	Lightning
	06/02/10 16:20 CST		0	Source: Newspaper
A lightning strike ignited a fire that damaged areas of the second floor and attic of a home in the 3600 block of Wyndwood Way in the Town of Bristol.				
DANE COUNTY --- 3.0 N DEERFIELD [43.09, -89.07], DEERFIELD [43.05, -89.07]				
	06/02/10 16:23 CST		0	Hail (0.75 in)
	06/02/10 16:23 CST		0	Source: Public
JEFFERSON COUNTY --- 1.0 W LAKE MILLS [43.08, -88.92]				
	06/02/10 16:25 CST		0	Hail (1.00 in)
	06/02/10 16:25 CST		0	Source: Trained Spotter
JEFFERSON COUNTY --- 2.0 SW LAKE MILLS [43.06, -88.93]				
	06/02/10 16:28 CST		0	Hail (1.75 in)
	06/02/10 16:28 CST		0	Source: Trained Spotter
JEFFERSON COUNTY --- LAKE MILLS [43.08, -88.90]				
	06/02/10 16:30 CST		0	Hail (1.00 in)
	06/02/10 16:35 CST		0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A line of strong thunderstorms pushed southeast across southern Wisconsin. Within the line, a fairly intense thunderstorm produced large hail-with the largest being 1.75 inches.

DANE COUNTY --- 1.0 W MIDDLETON [43.10, -89.52]

06/05/10 13:10 CST	0	Funnel Cloud
06/05/10 13:10 CST	0	Source: Public

Two individuals reported a funnel cloud 1 mile west of Middleton.

DANE COUNTY --- 4.0 S SUN PRAIRIE [43.12, -89.20], 2.0 E SUN PRAIRIE [43.18, -89.16]

06/05/10 13:10 CST	0	Funnel Cloud
06/05/10 13:25 CST	0	Source: Law Enforcement

Law enforcement, along with spotters and the general public, saw a funnel cloud form, dissipate, and reform from a thunderstorm as it moved northeast through the Sun Prairie area.

Thunderstorms developed during the afternoon of June 5th as low pressure moved along a frontal boundary draped across southern Wisconsin. A portion of the frontal boundary followed a southwest to northeast line across Dane and Dodge counties from Lake Mendota in Madison to Juneau. A west to east line of storms developed north of Middleton and pushed northeast. Funnel clouds formed when the thunderstorm cells intersected the boundary.

DANE COUNTY --- 1.0 NE CROSS PLAINS [43.13, -89.62]

06/06/10 14:12 CST	0	Hail (0.75 in)
06/06/10 14:12 CST	0	Source: Trained Spotter

DANE COUNTY --- 1.2 S SHOREWOOD HILLS [43.06, -89.47]

06/06/10 14:15 CST	0	Hail (0.75 in)
06/06/10 14:15 CST	0	Source: Amateur Radio

WASHINGTON COUNTY --- 4.0 NNW WEST BEND [43.47, -88.21]

06/06/10 16:20 CST	0	Hail (0.75 in)
06/06/10 16:20 CST	0	Source: Trained Spotter

WASHINGTON COUNTY --- WEST BEND [43.42, -88.18]

06/06/10 16:30 CST	0	Hail (0.88 in)
06/06/10 16:30 CST	0	Source: Trained Spotter

COLUMBIA COUNTY --- 2.0 SSE POYNETTE [43.37, -89.38]

06/06/10 16:38 CST	0	Hail (0.75 in)
06/06/10 16:38 CST	0	Source: Public

DANE COUNTY --- 2.0 N UTICA [43.00, -89.12]

06/06/10 16:45 CST	0	Hail (0.75 in)
06/06/10 16:45 CST	0	Source: Public

DANE COUNTY --- 5.0 SE MADISON TRUAX AIRPORT [43.09, -89.26]

06/06/10 17:20 CST	0	Hail (0.75 in)
06/06/10 17:20 CST	0	Source: Trained Spotter

A surface trough associated with an exiting low pressure system provided the focus for afternoon thunderstorms in the presence of marginal MLCAPE (< 250 J/kg). Instability due to mid-level lapse rates of 6 to 6.5 degrees C along with the 0 degree C level falling below 700 mb made hail a threat with the developing thunderstorms.

JEFFERSON COUNTY --- 0.8 SW WATERTOWN [43.19, -88.73]

06/18/10 01:12 CST	0	Thunderstorm Wind (EG 50 kt)
06/18/10 01:12 CST	0	Source: Trained Spotter

A tree two and one half feet in diameter blew down partially blocking the intersection of Highway 26 and Milwaukee Street in Watertown. Time estimated from radar.

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAFAYETTE COUNTY --- 1.0 W SOUTH WAYNE [42.57, -89.90], 1.0 S SOUTH WAYNE [42.56, -89.88]				
	06/18/10 13:30 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/10 13:30 CST		0	Source: Law Enforcement
Law Enforcement reported trees down.				
GREEN COUNTY --- MARTINTOWN [42.50, -89.80]				
	06/18/10 13:40 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/10 13:40 CST		0	Source: Public
General public reported a swath of downed trees from Martintown to northwest of Brodhead. Scattered pockets of felled trees were reported in a band about 3 miles wide.				
GREEN COUNTY --- JUDA [42.58, -89.50]				
	06/18/10 13:45 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/10 13:45 CST		0	Source: Public
General public reported a swath of downed trees from Martintown to northwest of Brodhead. Scattered pockets of felled trees were reported in a band about 3 miles wide.				
GREEN COUNTY --- 3.0 NW BRODHEAD [42.65, -89.41]				
	06/18/10 13:50 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/10 13:50 CST		0	Source: Law Enforcement
General public reported a swath of downed trees from Martintown to northwest of Brodhead. Scattered pockets of felled trees were reported in a band about 3 miles wide.				
ROCK COUNTY --- 4.0 SW ORFORDVILLE [42.59, -89.31]				
	06/18/10 14:05 CST		10K	Thunderstorm Wind (EG 65 kt)
	06/18/10 14:05 CST		0	Source: Public
Public reported trees and power-lines down.				
ROCK COUNTY --- BELOIT [42.52, -89.03]				
	06/18/10 14:20 CST		0	Thunderstorm Wind (EG 65 kt)
	06/18/10 14:20 CST		0	Source: Amateur Radio
A newspaper report indicated that trees and power lines were down due to powerful thunderstorm wind gusts.				
ROCK COUNTY --- 2.0 SW DOWNTOWN JANESVILLE [42.66, -89.05]				
	06/18/10 14:24 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/10 14:24 CST		0	Source: Trained Spotter
Trained spotter reported downed trees.				
ROCK COUNTY --- DOWNTOWN JANESVILLE [42.68, -89.02]				
	06/18/10 14:26 CST		0.10M	Thunderstorm Wind (EG 70 kt)
	06/18/10 14:26 CST		0	Source: Trained Spotter
Powerful thunderstorm winds raked the city of Janesville. At least 50 large trees were uprooted, and numerous power-lines were down. A metal roof of a business was ripped off by the winds. Elsewhere, a tree fell on a flatbed truck (minor damage), and a carriage house roof was blown off. Heavy rains resulted in minor urban flooding and a couple stalled vehicles.				
WALWORTH COUNTY --- 1.0 W DELAVAN [42.63, -88.65]				
	06/18/10 14:38 CST		0	Thunderstorm Wind (EG 52 kt)
	06/18/10 14:38 CST		0	Source: Amateur Radio
Ham Radio Operator reported estimated gusts up to 52 knots.				
WALWORTH COUNTY --- LAKE GENEVA [42.60, -88.43]				

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/18/10 14:40 CST		25K	Thunderstorm Wind (MG 56 kt)
	06/18/10 14:40 CST		0	Source: Public
Public reported trees and power lines down. A house was damaged resulting in approximatley \$2,000 worth of damage.				
WALWORTH COUNTY --- 3.0 E LAKE GENEVA [42.60, -88.37]				
	06/18/10 14:50 CST		0	Thunderstorm Wind (MG 55 kt)
	06/18/10 14:50 CST		0	Source: Mesonet
KENOSHA COUNTY --- KENOSHA AIRPORT [42.60, -87.93]				
	06/18/10 15:09 CST		0	Thunderstorm Wind (MG 51 kt)
	06/18/10 15:09 CST		0	Source: ASOS
Measured 51 knot wind gust by ASOS at Kenosha Airport.				
WAUKESHA COUNTY --- MUKWONAGO [42.87, -88.33]				
	06/18/10 15:10 CST		0	Thunderstorm Wind (MG 66 kt)
	06/18/10 15:10 CST		0	Source: Trained Spotter
Powerful thunderstorm wind gusts toppled several large trees.				
KENOSHA COUNTY --- 3.0 SW DOWNTOWN KENOSHA [42.55, -87.87], 1.0 S DOWNTOWN KENOSHA [42.57, -87.83]				
	06/18/10 15:11 CST		0.10M	Thunderstorm Wind (EG 65 kt)
	06/18/10 15:11 CST		0	Source: Amateur Radio
HAM radio operator reported trees and power lines down. Law enforcement reported a section of roof measuring 20 feet by 20 feet was blown off a building. A tree fell onto a vehicle and damaged it. Elsewhere a tree damaged an awning. At least 50 calls were made to the city 911 dispatchers about downed wires.				
KENOSHA COUNTY --- 3.0 SW DOWNTOWN KENOSHA [42.55, -87.87]				
	06/18/10 15:15 CST		10K	Thunderstorm Wind (EG 65 kt)
	06/18/10 15:15 CST		0	Source: Amateur Radio
Powerful thunderstorm wind gusts toppled several large trees and some power-lines came down. Minor urban flooding (water over the curb) also occurred.				
WAUKESHA COUNTY --- MUSKEGO [42.90, -88.13]				
	06/18/10 15:20 CST		0	Thunderstorm Wind (EG 65 kt)
	06/18/10 15:20 CST		0	Source: Trained Spotter
A trained spotter estimated a wind gust of 65 knots and a few large trees uprooted or broken.				
KENOSHA COUNTY --- 9.0 SW DOWNTOWN KENOSHA [42.49, -87.95]				
	06/18/10 15:26 CST		0	Thunderstorm Wind (EG 52 kt)
	06/18/10 15:26 CST		0	Source: Amateur Radio
HAM radio operator estimated a thunderstorm wind gust of 52 knots with a few large trees down.				
MILWAUKEE COUNTY --- (MKE)MITCHELL APT MI [42.95, -87.90]				
	06/18/10 15:31 CST		0	Thunderstorm Wind (MG 57 kt)
	06/18/10 15:31 CST		0	Source: ASOS
A bowing MCS developed in Iowa ahead of a cold front and pushed eastward into southern Wisconsin during the afternoon. The event was characterized by gusty winds with minor damage (trees down and power lines down) as well as heavy rain. At one point, more than 19,000 WE Energies' customers over southeast Wisconsin were without power after the event - mostly in the counties of Racine and Kenosha.				
LAFAYETTE COUNTY --- 3.9 NNW GRATIOT [42.63, -90.04], 2.8 WNW WIOTA [42.65, -90.00]				
	06/21/10 18:39 CST		15K	Tornado (EF1, L: 2.22 mi , W: 75 yd)
	06/21/10 18:45 CST		0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
An EF1 tornado developed in a rural area about 4.5 miles southeast of Darlington about 1/2 mile southwest of the intersection of Walnut Road and Pecatonica Road. The tornado moved east-northeast for about 2.2 miles, and dissipated about 0.4 miles north of the intersection of Walnut Road and Tish Road. Tornadoic damage was sporadic in the second-half of the tornado's life. One residence experienced siding and window damage. An outbuilding used as a garage on a farmstead lost its metal roof. One large hardwood tree was blown down and other tree limbs were broken. Minor crop damage was noted, but loss estimates were not available. The exact start location was Lat 42.63352 Lon. -90.04077. The exact end location was Lat. 42.64554 Lon. -90.00035. The EF-rating was based on DI 1 (SBO), DOD 5 which suggests wind speeds between 90 and 95 mph. Average path width was 50 yards.				

DANE COUNTY --- 1.0 WSW CROSS PLAINS [43.11, -89.65], 0.8 WSW CROSS PLAINS [43.12, -89.64]

06/21/10 18:41 CST	15K	Tornado (EF1, L: 0.16 mi , W: 40 yd)
06/21/10 18:43 CST	0	Source: Law Enforcement

A brief EF1 tornado spun up within the city of Cross Plains between Julius Street and Sylvia Pine Way and moved northeast to near the intersection of Caesar Street and Woodside Drive and dissipated. At least 3 homes had minor roof damage. A number of large trees were uprooted or broken in half. An in-ground basketball pole was bent to a 45 degree angle. Roof soffit and fascia siding was peeled off a municipal pool house. The severe thunderstorm become outflow dominated and resulted in straight line wind damage (trees) further northeast over rural areas northeast Cross Plains. some crop damage was seen, but loss estimates were unavailable. The exact start location was Lat. 43.114895 Lon. -89.647946. The exact end location was Lat. 43.11522 Lon. -89.645138. The EF-rating was based on DI 2 (TH), DOD 4 which suggests wind speeds between 90 and 100 mph. Average path width was 20 yards.

DANE COUNTY --- 2.0 NE CROSS PLAINS [43.14, -89.60]

06/21/10 18:45 CST	0	Thunderstorm Wind (EG 65 kt)
06/21/10 18:50 CST	0	Source: NWS Storm Survey

NWS survey team found numerous trees blown down by straight-line thunderstorm wind gusts estimated at 65 knots (75 mph).

GREEN COUNTY --- 3.3 NW JORDAN [42.69, -89.82]

06/21/10 19:03 CST	0	Thunderstorm Wind (EG 56 kt)
06/21/10 19:03 CST	0	Source: Law Enforcement

Law enforcement officials reported numerous trees blown down by thunderstorm wind gusts estimated at 56 knots (64 mph).

ROCK COUNTY --- EDGERTON [42.83, -89.07]

06/21/10 19:07 CST	0	Thunderstorm Wind (EG 65 kt)
06/21/10 19:12 CST	0	Source: Law Enforcement

Law enforcement officials reported numerous trees blown down by thunderstorm wind gusts estimated at 65 knots (74 mph).

DANE COUNTY --- MC FARLAND [43.02, -89.28]

06/21/10 19:15 CST	0	Hail (1.00 in)
06/21/10 19:15 CST	0	Source: Trained Spotter

JEFFERSON COUNTY --- 0.2 SW BUSSEYVILLE [42.90, -88.98], 1.1 NE BUSSEYVILLE [42.91, -88.96]

06/21/10 19:15 CST	0.62M	Tornado (EF1, L: 1.32 mi , W: 100 yd)
06/21/10 19:17 CST	10K	Source: NWS Storm Survey

An EF1 tornado developed in Busseyville just south of the intersection of Draves Road and Loga Road, and moved northeast about 1.3 miles and dissipated at the intersection of STH 106 and Carcajou Rd. Thirty residential structures were minimally affected, 1 had minor damage , and 2 sustained major damage (one of which had a large tree collapse part of the structure). A vehicle was damaged when a large tree branch fell on it. Total private sector damage was estimated at \$620,000, which included \$590,000 for residential structures, \$25,000 for farm buildings, and \$5,000 for the damaged vehicle. Uprooted trees and snapped tree limbs were noted along the path of the tornado. Some crop damage was noted with a loss estimate of about \$10,000. Public sector service (non-damage) costs were limited to just debris clearance which totaled \$8,000. The exact start location was Lat.42.89798 Lon. -88.98371. The exact end location was Lat 42.91102 Lon. -88.96454. The EF-rating was based on DI 27 (TH) DOD3 which suggests wind speeds between 90 and 100 mph. The average path width was 50 yards.

ROCK COUNTY --- 2.0 E NEWVILLE [42.83, -88.98]

06/21/10 19:15 CST	0	Hail (1.50 in)
06/21/10 19:15 CST	10K	Source: Emergency Manager

A severe thunderstorm produced hail up to 1.50 inches in diameter east of Newville just north of CTH N. A portion of a corn field was flattened by the hail.

DANE COUNTY --- 2.0 E ALBION [42.88, -89.03]

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/21/10 19:19 CST		0	Hail (1.50 in)
	06/21/10 19:19 CST		0	Source: Amateur Radio
DANE COUNTY --- DE FOREST [43.25, -89.33]				
	06/21/10 19:20 CST		0	Funnel Cloud
	06/21/10 19:20 CST		0	Source: Law Enforcement
Law enforcement officials reported a funnel cloud over De Forest. The time is estimated from radar imagery.				
JEFFERSON COUNTY --- 2.0 SW FT ATKINSON [42.91, -88.88]				
	06/21/10 19:22 CST		15K	Hail (1.50 in)
	06/21/10 19:22 CST		0	Source: Public
The public reported large hail from a severe thunderstorm that caused damage to the roofs of several homes.				
JEFFERSON COUNTY --- FT ATKINSON [42.93, -88.85]				
	06/21/10 19:24 CST		0	Hail (1.00 in)
	06/21/10 19:24 CST		0	Source: Amateur Radio
JEFFERSON COUNTY --- 4.7 SW FT ATKINSON [42.88, -88.92]				
	06/21/10 19:26 CST		0	Thunderstorm Wind (EG 70 kt)
	06/21/10 19:26 CST		0	Source: Newspaper
A local newspaper reported that thunderstorm winds knocked down numerous trees wn southwest of Ft. Atkinson.				
SAUK COUNTY --- 1.0 E REEDSBURG [43.53, -89.98]				
	06/21/10 19:55 CST		0	Funnel Cloud
	06/21/10 19:55 CST		0	Source: Public
WAUKESHA COUNTY --- EAGLE [42.88, -88.47]				
	06/21/10 20:00 CST		0	Hail (1.50 in)
	06/21/10 20:05 CST		0	Source: Trained Spotter
WAUKESHA COUNTY --- 1.9 WSW EAGLE [42.87, -88.50], 1.9 SE JERICHO [42.86, -88.39]				
	06/21/10 20:11 CST		20.60M	Tornado (EF2, L: 5.22 mi , W: 880 yd)
	06/21/10 20:21 CST	15	0	Source: Law Enforcement
<p>An EF2 tornado developed about 1.9 miles west-southwest of the Village of Eagle, roughly 1/2 mile south-southeast of the intersection of STH 59 and CTH S, just west of CTH S and west of a horse-riding ranch, and moved east-northeast through the Eagle and then moved due east and then east-southeast before dissipating about 1.94 miles southeast of Jericho, just within Mukwonago County Park, 1000 feet east of Genevieve Drive. Fifteen people sustained minor injuries. One hundred thirty-four homes received minor damage, 67 homes had major damage, and 8 homes were destroyed, mainly in the southern part of the village. Another 75 homes were minimally affected. One business received major damage, while 18 businesses had minor damage. The business that received major damage was a commercial horse-riding ranch/western town at the beginning of the tornado path. Damage was inflicted upon all of the fencing, two trolleys, and 18 tables. One of the biggest buildings on the site was twisted and turned. A donkey was killed, four hayride wagons were lost, and 25 acres of trees were damaged. The owner of the riding ranch saw the tornado and said it looked like the Fourth of July fireworks finale - there were thousands of lightning streaks in the cone. All together, this tornado uprooted or damaged thousands of trees, and at least three dozen vehicles were damaged or totaled. At Old World Wisconsin, an outdoor museum operated by the Wisconsin Historical Society near Eagle, about 2500 tress were damaged at this site alone, and a few buildings sustained minor damage. Overall, Emergency Management officials estimated that residential damage reached \$20,577,500, with business damage around \$311,500, bringing total private sector damage to about \$20,889,000. A few agricultural buildings were damaged, but loss estimates were not available. Public sector structural damage totaled only about \$600, while public sector service costs (non-damage) such as debris clean-up, security and public protection, road protective measures, and other miscellaneous expenses were estimated at \$101,965. The starting point location was Lat. 42.86785 Lon.-88.50307. The end point location was Lat.42.87100 Lon. -88.40003. The EF-rating was based on DI 2 (FR12) DOD 6 which suggests wind speeds between 125 to 130 mph. On the WSR-88D Doppler radar at the nearby WFO Milwaukee (MKX), a "debris-ball" appeared near Eagle within a classic hook echo as the parent thunderstorm moved east.</p>				
WAUKESHA COUNTY --- DOUSMAN [43.02, -88.47]				
	06/21/10 20:20 CST		0	Thunderstorm Wind (EG 60 kt)
	06/21/10 20:20 CST		0	Source: Law Enforcement
Law enforcement officials reported a number of tress blown down across the town due to strong thunderstorm winds.				

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WALWORTH COUNTY --- EAST TROY [42.78, -88.40]				
	06/21/10 20:34 CST		0	Thunderstorm Wind (EG 65 kt)
	06/21/10 20:34 CST		0	Source: Law Enforcement
Law enforcement officials reported trees and power lines were blown down in multiple locations in East Troy due to strong thunderstorm wind gusts.				
WAUKESHA COUNTY --- 2.2 NNW BIG BEND [42.91, -88.21], 0.6 S TESS CORNERS [42.91, -88.10]				
	06/21/10 20:36 CST		0.43M	Tornado (EF1, L: 5.89 mi , W: 200 yd)
	06/21/10 20:48 CST		0	Source: Law Enforcement
This EF1 tornado affected the Big Bend and Muskego area, and spun up a little more than 2 miles north of Big Bend about 1/10 of a mile southeast of the intersection of Interstate 43 and STH 164. The tornado moved east, dissipating about 1/2 mile south of Tess Corners, just northwest of the intersection of Woods Road and Durham Drive. The roof of the Tess Corners Fire Department tore off, and the U.S. Post Office building in Muskego was damaged when an air conditioning unit was blown off the roof. Several post office vehicles were also damaged. The building housing Muskego Beer and Liquor was badly damaged when a wall collapsed and destroyed half the building. All together, 35 residential dwellings were minimally affected, and 41 homes sustained minor damage. Seventeen businesses were minimally affected, and 1 sustained major damage. Some crops were damaged, but no information on loss estimates was available. Total estimated private sector damage was about \$430,000. Public sector structural damage totaled about \$15,000. Additionally, other public service (non-damage) costs totaled \$65,000; which included \$45,000 for debris clearance, \$10,000 for protective measures, and \$10,000 for road systems. Hundreds of trees were uprooted or damaged. Starting location point was Lat 42.91015 Lon -88.21483 with the ending point Lat 42.91118 Lon -88.09850. The EF-rating was based on DI 27 (TH) DOD3 which suggests a wind speed of 105 mph. The average path width was 90 yards.				
RACINE COUNTY --- WIND LAKE [42.83, -88.15]				
	06/21/10 20:43 CST		0	Thunderstorm Wind (EG 60 kt)
	06/21/10 20:43 CST		0	Source: Law Enforcement
Police officials reported many trees and power lines down in Wind Lake.				
MILWAUKEE COUNTY --- 2.0 SSE FRANKLIN [42.84, -88.06]				
	06/21/10 20:46 CST		0	Hail (1.00 in)
	06/21/10 20:46 CST		0	Source: Trained Spotter
WAUKESHA COUNTY --- 1.5 WNW MUSKEGO [42.91, -88.16], 1.0 NNE MUSKEGO [42.91, -88.12]				
	06/21/10 20:48 CST		0	Thunderstorm Wind (EG 65 kt)
	06/21/10 20:48 CST		0	Source: Law Enforcement
Law enforcement officials reported numerous trees and power lines blown down across the northern quarter of the community.				
MILWAUKEE COUNTY --- 1.0 WSW FRANKLIN [42.86, -88.10]				
	06/21/10 20:55 CST		0	Thunderstorm Wind (EG 56 kt)
	06/21/10 20:55 CST		0	Source: NWS Employee
Powerful thunderstorm winds snapped some large trees.				
RACINE COUNTY --- STURTEVANT [42.70, -87.90]				
	06/21/10 21:08 CST		0	Thunderstorm Wind (EG 52 kt)
	06/21/10 21:08 CST		0	Source: Amateur Radio
HAM radio operator estimated 52 knot (60 mph) thunderstorm wind gusts in Sturtevant.				
Strong to severe thunderstorms developed across much of south central and southeast Wisconsin during the evening of June 21, 2010. A vigorous upper level disturbance helped to support deep vertical motions in the atmosphere, along with strong deep layer wind shear. This lift acted on a warm and very moist atmosphere, carried into the region on a 40 to 50 knot low-level jet. The result was powerful rotating thunderstorms, with damaging straight line winds, large hail, and in this case, 5 tornadoes. At one point during the height of the event, around 48,000 customers in southeast Wisconsin were without electric power due to downed power lines. However, power-line and power-pole loss estimates were not available and do not show up as damage amounts in any individual event within this severe weather episode.				

Location Date/Time Deaths & Injuries Property & Crop Dmg Event Type and Details

Storm Data and Unusual Weather Phenomena - June 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
DANE COUNTY --- DOWNTOWN MADISON [43.07, -89.42]				
	06/23/10 03:30 CST		10K	Lightning
	06/23/10 03:30 CST		0	Source: Newspaper

Lightning struck a telephone line that resulted in an unknown number of customers losing telephone service. Exact location within the city is unknown. Time of event and damage amount are estimated.

LAFAYETTE COUNTY --- 1.0 N DARLINGTON [42.69, -90.12]				
	06/23/10 03:40 CST		0	Thunderstorm Wind (EG 56 kt)
	06/23/10 03:40 CST		0	Source: Law Enforcement

Law enforcement reported trees down 1 mile north of Darlington.

JEFFERSON COUNTY --- 3.0 W WATERTOWN [43.20, -88.78], 3.0 NE IXONIA [43.18, -88.56], 3.0 SE IXONIA [43.12, -88.56], 4.0 SW WATERTOWN [43.16, -88.78]				
	06/23/10 04:30 CST		25K	Flash Flood (due to Heavy Rain)
	06/23/10 07:30 CST		5K	Source: Trained Spotter

Three to five inches of rain fell with a severe thunderstorm complex that crossed southern Wisconsin. Many streets were flooded in Watertown where a measured 3.25 inches of rain fell in 4 hours. Law enforcement officials closed Industrial Road in Ixonia due to flooding. Water depths on some roads reached 1 to 3 feet. A few gravel shoulder washouts on country roads were reported.

A warm front lifted through southern Wisconsin on the nose of a 30 knot low-level jet. Good elevated instability...MLCAPE 2000-3000J/kg...and 40 to 50 knots of deep layer shear supported an MCS as it tracked from northern Iowa across southern Wisconsin during the early morning hours of June 23rd. Although the complex weakened as it crossed Wisconsin, it still produced scattered wind damage as well as flash flooding in portions of Jefferson County and northwest Waukesha County.

RACINE COUNTY --- 0.8 WNW STURTEVANT [42.70, -87.92], 0.8 S ELMWOOD PARK [42.69, -87.83]				
	06/27/10 12:20 CST		75K	Tornado (EF1, L: 4.60 mi , W: 100 yd)
	06/27/10 12:28 CST	1	0	Source: NWS Storm Survey

A tornado spun up just northwest of the village of Sturtevant just northwest of the intersection of STH 11 and Wisconsin St., and moved east-southeast through the northern part of the village before dissipating in the Elmwood Park area near the intersection of Taylor Ave and Meachem Rd. It damaged two doors of the Sturtevant Fire Department, damaged the roofs and windows of two homes, uprooted a tree that crashed through another home, and knocked over another tree that damage a truck. One person was injured when the tornado winds rushed into her home and pushed her three feet against a banister. Numerous vehicles in a WalMart parking lot had broken windows from airborne debris. It overturned, moved, and slightly damaged two trailers about 50 yards at a local business where it also snapped 3 light poles. At least two to three dozen trees were uprooted or had broken limbs. The beginning and ending lat/lon pairs of numbers were: 42.70306/-87.91533 and 42.68797/-87.82715. The EF-rating was based on DI 27 (FR12), DOD3 EXP, which suggests maximum wind speeds about 95 to 100 mph.

Elsewhere, rear flank downdraft winds from the storm produced scattered minor damage over the extreme southeast corner of Racine County and northeast Kenosha County. The thunderstorm may also have produced a waterspout as it moved out over Lake Michigan about 1 mile north-northeast of the intersection of State Highway 32 and County Highway KR. However, there was no confirmation.

Scattered thunderstorms developed along an outflow boundary left over from convection earlier in the day, and then moved east along the boundary from Southwest Wisconsin to Southeast Wisconsin during the late morning and early afternoon hours. Though the convection was low-top, decent CAPE values, 0-3KM shear and helicity provided the environment for a thunderstorm cell to produce tornado in Racine County. The tornado produced EF1 damage as it moved east-southeast through the northern part of Sturtevant.

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	07/14/10 23:50 CST		0	Marine Thunderstorm Wind (MG 45 kt)
	07/14/10 23:50 CST		0	Source: C-MAN Station
PT WASHINGTON TO NORTH PT LT WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	07/15/10 00:02 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	07/15/10 00:02 CST		0	Source: C-MAN Station
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	07/15/10 01:10 CST		0	Marine Thunderstorm Wind (MG 46 kt)
	07/15/10 01:20 CST		0	Source: C-MAN Station
Frequent wind gusts 37 to 46 knots in the 10 minute period.				
Line of strong to severe thunderstorms swept across eastern Wisconsin and the nearshore waters of Lake Michigan.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	07/15/10 11:10 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	07/15/10 11:20 CST		0	Source: C-MAN Station
Frequent gusts to 38 knots in the 10 minute period.				
An isolated strong thunderstorm affected the nearshore waters of Lake Michigan south of Wind Point.				
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	07/15/10 20:10 CST		0	Marine Thunderstorm Wind (MG 41 kt)
	07/15/10 20:10 CST		0	Source: C-MAN Station
A line of thunderstorms affected the Lake Michigan nearshore waters producing damaging wind gusts.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	07/22/10 20:40 CST		0	Marine Thunderstorm Wind (MG 48 kt)
	07/22/10 21:00 CST		0	Source: C-MAN Station
Frequent wind gusts from 38 knots to 48 knots during the 20 minute period.				
Numerous strong to severe thunderstorms affected the nearshore waters of Lake Michigan.				
WISCONSIN, Southeast				
COLUMBIA COUNTY --- 3.0 SW CAMBRIA [43.52, -89.14], 2.1 ESE CAMBRIA [43.54, -89.06]				
	07/07/10 17:27 CST		0.10M	Tornado (EF1, L: 4.23 mi , W: 125 yd)
	07/07/10 17:41 CST		5K	Source: NWS Storm Survey
An EF1 tornado developed about 2.5 miles southwest of Cambria, about 0.25 miles northeast of the intersection of Old B Road and Welsh Prairie Road, and moved east-northeast to around 2.1 miles east-southeast of Cambria, ending near Fordeg Road just north of Cemetery Road. The tornado moved across a farm where it collapsed the walls of a barn, ripped the fabric off of a shed, moved a fertilizer spreader 300 to 400 feet and pushed a shed door 6 inches. Additionally, 15 acres of corn and 5 acres of wheat were flattened, and numerous trees were uprooted or had branches snapped off. The average path width was 40 yards. The EF1 estimated wind speed of 90 to 95 mph was based on DI 1(SBO) DOD6. The exact start location is Lat 43.52061 Lon -89.14369. The exact end location is Lat 43.53732 Lon -89.06274.				
COLUMBIA COUNTY --- 2.5 SW CAMBRIA [43.52, -89.14]				
	07/07/10 17:30 CST		0	Hail (1.25 in)
	07/07/10 17:30 CST		0	Source: Public

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Scattered strong to severe thunderstorms developed ahead of a surface cold front that was being driven across the western Great Lakes region by the southern end of an upper trough. The front moved into a moist, unstable air mass over southern Wisconsin, with mixed layer CAPE values of 1000 J/kg to 1500 J/kg. Though overall wind shear was marginal...there was sufficient shear to allow a thunderstorm near Cambria in Columbia County to become tornadic.

DODGE COUNTY --- 3.0 W WAUPUN [43.63, -88.79]

07/10/10 16:00 CST	0	Thunderstorm Wind (EG 50 kt)
07/10/10 16:00 CST	0	Source: Law Enforcement

Law enforcement reported power lines down on the Dodge County side of County Highway AW due to thunderstorm wind gusts.

WAUKESHA COUNTY --- MUSKEGO [42.90, -88.13]

07/10/10 18:01 CST	0	Hail (0.75 in)
07/10/10 18:01 CST	0	Source: Law Enforcement

The Muskego Police Department reported 3/4 inch hail fell in the city.

A short wave trough crossing central Wisconsin combined with a moist unstable air mass, where afternoon CAPE values reach 2000 to 3000J/kg, to produce scattered strong to severe thunderstorms over portions of Southeast Wisconsin. Damaging thunderstorm wind gusts and hail up to 3/4 inch in diameter were produced by the thunderstorms.

FOND DU LAC COUNTY --- 3.0 S ROSENDALE [43.76, -88.68]

07/11/10 15:20 CST	0	Funnel Cloud
07/11/10 15:20 CST	0	Source: Trained Spotter

A trained spotter reported a funnel cloud descending from a rotating wall cloud 3 miles south of Rosendale.

GREEN COUNTY --- 7.0 SW BRODHEAD [42.55, -89.47]

07/12/10 16:13 CST	0	Funnel Cloud
07/12/10 16:13 CST	0	Source: Trained Spotter

A trained spotter reported a rotating funnel cloud 7 miles southwest of Brodhead.

Funnel clouds and rotating wall clouds were reported in Fond Du Lac County on July 11th and in Green County on July 12th.

(WI-Z062) IOWA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN

07/11/10 22:00 CST	0	Dense Fog
07/12/10 07:00 CST	0	

Clearing skies and moist air due to recent rains, combined with light winds and cooling temperatures to produce dense fog over portions of South Central Wisconsin. Visibilities were reduced to 1/4 mile or less from around midnight to 830 am CDT on July 12th.

(WI-Z072) KENOSHA

07/13/10 22:00 CST	0	Dense Fog
07/14/10 04:00 CST	0	

A combination of clear skies, light winds and abundant near-ground moisture produced dense fog over Kenosha County, beginning during the late night hours of July 13th and lasting into the early morning hours of July 14th. Visibilities were reduced to 1/4 mile or less.

(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK

07/14/10 16:00 CST	0	Heat
07/14/10 16:00 CST	0	

A warm front lifted into far southern Wisconsin, bringing a hot and humid air mass into the region. Temperatures in the 90s and dew points in the 70s produced heat index values between 100 and 104.

FOND DU LAC COUNTY --- 2.0 N RIPON [43.86, -88.83]

07/14/10 18:30 CST	0	Thunderstorm Wind (EG 52 kt)
07/14/10 18:30 CST	0	Source: Trained Spotter

A trained spotter reported trees blown down by thunderstorm wind gusts estimated at 52 knots (60 mph).

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
SAUK COUNTY --- 2.0 NW LAKE DELTON [43.60, -89.81]				
	07/14/10 18:33 CST		0	Thunderstorm Wind (EG 50 kt)
	07/14/10 18:33 CST		0	Source: Public
The public reported a thunderstorm wind gust estimates at 50 knots (58 mph).				
DODGE COUNTY --- 2.0 NW FOX LAKE [43.59, -88.93]				
	07/14/10 19:05 CST		0	Thunderstorm Wind (EG 52 kt)
	07/14/10 19:05 CST		0	Source: Public
The public reported a thunderstorm wind gust estimated at 60 mph (52 knots).				
SHEBOYGAN COUNTY --- 5.0 W CASCADE [43.67, -88.10]				
	07/14/10 19:42 CST		0	Thunderstorm Wind (EG 52 kt)
	07/14/10 19:42 CST		0	Source: Public
The public reported trees blown down by thunderstorm wind gusts estimated at 52 knots (60 mph).				
WASHINGTON COUNTY --- HARTFORD [43.32, -88.38]				
	07/14/10 19:53 CST		10K	Thunderstorm Wind (EG 52 kt)
	07/14/10 19:53 CST		0	Source: Emergency Manager
The emergency manager of Washington County reported trees and power lines blown down by thunderstorm wind gusts in Hartford and a few other locations in the county.				
COLUMBIA COUNTY --- WISCONSIN DELLS [43.63, -89.77], PORTAGE [43.55, -89.45]				
	07/14/10 22:00 CST		20K	Thunderstorm Wind (EG 61 kt)
	07/14/10 22:18 CST		0	Source: Trained Spotter
A trained spotter reported trees and power lines blown down by thunderstorm wind gusts estimated at 70 mph (61 knots) along a path from the Wisconsin Dells to Portage.				
MARQUETTE COUNTY --- 2.5 NNE BRIGGSVILLE [43.68, -89.56]				
	07/14/10 22:02 CST		0	Thunderstorm Wind (EG 52 kt)
	07/14/10 22:02 CST		0	Source: Fire Department/Rescue
Fire department personnel reported thunderstorm wind gusts up to an estimated 52 knots (60 mph).				
COLUMBIA COUNTY --- 10.0 W COLUMBUS [43.33, -89.22]				
	07/14/10 22:40 CST		0	Thunderstorm Wind (EG 56 kt)
	07/14/10 22:40 CST		0	Source: Law Enforcement
Law enforcement personnel reported trees blown down by thunderstorm wind gusts estimated at 56 knots (65 mph).				
SAUK COUNTY --- 2.0 N ROCK SPGS [43.51, -89.92], 2.0 NE BARABOO [43.49, -89.70], 2.0 SE BARABOO [43.45, -89.70], 2.0 SW ROCK SPGS [43.46, -89.95]				
	07/14/10 22:45 CST		30K	Flash Flood (due to Heavy Rain)
	07/15/10 01:30 CST		10K	Source: Emergency Manager
The Sauk County Emergency Manager reported one to three feet of water over some roads, mainly in the northern portion of the county...with sandbagging operations in Rock Springs along the rapidly rising Baraboo River. A trained spotter reported street flooding along Highway 33 in Baraboo. The flooding was the result of heavy rains from strong to severe thunderstorms crossing the region. A farmer near La Valle lost 30 head of cattle that drowned when they left high ground into the rushing waters of the Little Baraboo River. Minor crop damage was also noted.				
DODGE COUNTY --- FOX LAKE [43.57, -88.90]				
	07/14/10 22:50 CST		5K	Thunderstorm Wind (EG 65 kt)
	07/14/10 23:00 CST		0	Source: Law Enforcement
Law enforcement officials reported trees and power poles blown down by thunderstorm wind gusts estimated at 65 knots (75 mph).				
DODGE COUNTY --- 1.0 NE BEAVER DAM [43.48, -88.82]				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/14/10 22:58 CST		0	Thunderstorm Wind (EG 52 kt)
	07/14/10 22:58 CST		0	Source: Trained Spotter

A trained spotter estimated thunderstorm wind gusts up to 52 knots (60 mph).

SAUK COUNTY --- 7.0 W LA VALLE [43.58, -90.27]

07/14/10 23:00 CST	0	Thunderstorm Wind (EG 56 kt)
07/14/10 23:00 CST	0	Source: Public

The public reported trees blown down by thunderstorm wind gusts estimated up to 56 knots (70 mph).

WASHINGTON COUNTY --- 3.4 SW WEST BEND [43.38, -88.23]

07/14/10 23:20 CST	20K	Lightning
07/14/10 23:30 CST	0	Source: Fire Department/Rescue

The West Bend Fire Department responded to four calls for trees on fire due to lightning strikes and power line damage due to lightning strikes, including near the intersection of CTH NN and Scenic Rd. in West Bend.

DODGE COUNTY --- MAYVILLE [43.50, -88.55]

07/14/10 23:22 CST	1K	Thunderstorm Wind (EG 65 kt)
07/14/10 23:22 CST	0	Source: Law Enforcement

Law enforcement reported a power pole snapped by strong thunderstorm wind gusts estimated up to 65 knots (75 mph).

SHEBOYGAN COUNTY --- 2.0 W GREENBUSH [43.78, -88.12]

07/14/10 23:30 CST	0	Thunderstorm Wind (EG 52 kt)
07/14/10 23:30 CST	0	Source: Law Enforcement

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

WASHINGTON COUNTY --- 5.0 N SLINGER [43.40, -88.28]

07/14/10 23:40 CST	0	Thunderstorm Wind (EG 52 kt)
07/14/10 23:40 CST	0	Source: Law Enforcement

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

WAUKESHA COUNTY --- 2.0 NE LANNON [43.17, -88.14]

07/14/10 23:55 CST	0	Thunderstorm Wind (EG 52 kt)
07/14/10 23:55 CST	0	Source: Public

The public reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

OZAUKEE COUNTY --- 3.0 SW SAUKVILLE [43.35, -87.97]

07/15/10 00:00 CST	0	Thunderstorm Wind (EG 52 kt)
07/15/10 00:00 CST	0	Source: Law Enforcement

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

MILWAUKEE COUNTY --- 8.0 N MILWAUKEE INTERNATIONAL AIRPORT [43.06, -87.90], 1.6 SE BUTLER [43.06, -88.05], 2.7 SSW STATE FAIR PARK [42.99, -88.04], 1.3 SW MILWAUKEE SOUTH SHORE PARK [42.98, -87.90]

07/15/10 00:45 CST	10K	Flash Flood (due to Heavy Rain)
07/15/10 03:30 CST	0	Source: Law Enforcement

Heavy rain from strong to severe thunderstorms produced 3 to 4 inch rainfall amounts in only a couple of hours. Flash flooding from the heavy rain flooded basements in West Allis; blocked the east-bound lanes of Greenfield Avenue between 116th St. and 124th St.; blocked 82nd St. and 83rd St. near Orchard St. with two to three feet of water over the roads that stalled cars; made I-794 at the south end of the Hoan Bridge impassable due to high water over the roadway; and quickly filled the 2500 block of N. Humboldt Ave. with 2 feet of water.

WAUKESHA COUNTY --- 1.5 NE ELM GROVE [43.06, -88.06], 1.7 ESE PEWAUKEE [43.07, -88.24], 2.1 ENE BETHESDA [42.99, -88.24], 1.1 ESE PROSPECT [42.95, -88.13], 3.5 ENE NEW BERLIN [43.00, -88.05]

07/15/10 00:45 CST	5K	Flash Flood (due to Heavy Rain)
07/15/10 03:30 CST	0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Heavy rain from strong to severe thunderstorms that moved across the region produced flash flooding from 3 to 4-inch rainfall that fell in only a couple of hours. All of the I-94 ramps in Brookfield were closed for a time due to high water. Water covered Sunset Drive at a railroad intersection about 1 mile southwest of Waukesha. Trained spotters reported 2 feet of water flowing through the intersection of Calhoun Rd and Beloit Rd., as well as Overland Trail near Brookfield Rd. in New Berlin.				
COLUMBIA COUNTY --- 2.0 NW LODI [43.34, -89.55], DEKORRA [43.47, -89.47], 2.0 NNW POYNETTE [43.43, -89.42], LODI [43.32, -89.52]				
	07/15/10 01:00 CST		60K	Flash Flood (due to Heavy Rain)
	07/15/10 03:00 CST		10K	Source: Emergency Manager
The Columbia County Emergency Manager reported gravel shoulder wash-outs on several roads and one to two feet of water on low-lying roads from heavy rains as strong to severe thunderstorms crossed the region. Minor crop damage was also noted.				
A continuous feed of moisture, in a low to mid-level warm air advection regime, impinged along an outflow boundary draped across southern Wisconsin. This set-up fueled thunderstorms that developed, and redeveloped, along the boundary from the evening of July 14th into the early morning hours of July 15th. Flash flooding occurred in the hills of the Wisconsin River Valley, and in the urban areas of Waukesha and Milwaukee counties, where more than 4 inches of rain fell from the evening into the overnight hours.				
KENOSHA COUNTY --- KENOSHA AIRPORT [42.60, -87.93]				
	07/15/10 16:59 CST		0	Thunderstorm Wind (MG 50 kt)
	07/15/10 16:59 CST		0	Source: ASOS
KENOSHA COUNTY --- 0.5 SSE KENOSHA AIRPORT [42.59, -87.93], 2.6 WNW DOWNTOWN KENOSHA [42.60, -87.88]				
	07/15/10 17:10 CST		50K	Thunderstorm Wind (EG 52 kt)
	07/15/10 17:15 CST		0	Source: Trained Spotter
A severe thunderstorm moved east from near Kenosha Airport, where a small plane was damaged, across western and southern portions of the city of Kenosha. Sporadic damage was reported as the damaging thunderstorm wind gusts fanned out along and either side of a line from the airport to near the intersection of 56th Avenue and 42nd Street. Power poles were snapped and a transformer exploded knocking out power to about 5000 customers. Ten to twelve-inch tree limbs were broken and trees were felled by the powerful winds. A portion of the roof of the Oemmmco building was blown off.				
A cold front, trailing from low pressure to the north of Wisconsin, was draped across far Southeast Wisconsin around midday on July 15th. A thunderstorm rapidly developed along the front in western Kenosha County, and became severe as it swept across eastern sections of the county before moving out over Lake Michigan.				
RACINE COUNTY --- 1.6 ESE BROWNS LAKE [42.66, -88.20], 1.1 E DOWNTOWN RACINE [42.72, -87.78]				
	07/18/10 10:00 CST		25K	Thunderstorm Wind (EG 52 kt)
	07/18/10 10:40 CST	1	0	Source: Newspaper
A thunderstorm developed southeast of Burlington and rapidly strengthened as it moved east-northeast across the city of Racine. Numerous trees and power lines were blown down by the thunderstorm wind gusts, mainly on the west side of the city. About 1,000 WE electric customers were without power at the height of the storm. A spectator at the Racine Triathlon at the lakefront sustained a minor injury when struck by a tent that blew over in the winds.				
SHEBOYGAN COUNTY --- 0.8 N HOWARDS GROVE [43.84, -87.82], 0.7 SSW HAVEN [43.84, -87.76]				
	07/18/10 14:21 CST		5K	Tornado (EF0, L: 3.31 mi , W: 50 yd)
	07/18/10 14:28 CST		0	Source: NWS Storm Survey
A rapidly developing thunderstorm produced an EF0 tornado that began about 0.6 miles north-northwest of the town of Howards Grove, on Tyler Road, just north of Roosevelt Road and west of STH 42, and ended 0.5 miles south-southwest of the town of Haven, about 0.5 miles north-northeast of the intersection of Rowe Road and Dairyland Drive. The tornado snapped tree branches at sporadic locations along the path, which averaged 25 yards in width with a maximum width of 50 yards, and overturned and damaged an SUV and an attached trailer on I-43. The EF0 wind speed was estimated at 75-80 mph based on DI 27(TH), DOD2. The exact start location is Lat 43.841972 and Lon -87.822667. The exact end location is Lat 43.84111 and Lon -87.75621.				
A surface low pressure and associated cold front moved across southern Wisconsin triggering isolated thunderstorms during the morning and afternoon on July 18th. There was sufficient wind shear for one of the storms to produce a tornado in Sheboygan County...with a severe thunderstorm in Racine County producing 60 mph wind gusts that damaged trees and dropped power lines in the city of Racine. Ten trees were felled in Holy Cross cemetery that damaged many headstones.				
SAUK COUNTY --- HILLPT [43.42, -90.12], LIMERIDGE [43.47, -90.15], 3.0 SW REEDSBURG [43.50, -90.04], 2.0 W ROCK SPGS [43.48, -89.96]				
	07/19/10 17:45 CST		0	Flash Flood (due to Heavy Rain)
	07/19/10 21:00 CST		0	Source: Law Enforcement
Slow-moving thunderstorms produced 3 inches of rain in a short amount of time. Several roads were closed, including Herritz Road at CTH F and CTH S at Narrows Valley Road due to high water making the roads impassable.				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>A pocket of slow-moving thunderstorms produced 3 inches of rain in less than 2 hours over hilly terrain in central Sauk County. Roads made impassable due to high water were closed by law enforcement officials .</p>				
(WI-Z056) SAUK				
	07/19/10 23:00 CST		0	Dense Fog
	07/20/10 04:00 CST		0	
<p>A combination of clear skies, light winds and abundant near-ground moisture produced dense fog over Sauk County, and northern sections of Iowa County beginning during the late night hours of July 19th and lasting into the early morning hours of July 20th. Visibilities were reduced to 1/4 mile or less.</p>				
DANE COUNTY --- 1.6 NW DANE [43.27, -89.52], 1.0 NNE DANE [43.26, -89.49]				
	07/22/10 15:08 CST		1K	Tornado (EF1, L: 1.53 mi , W: 30 yd)
	07/22/10 15:10 CST		0.10K	Source: Public
<p>A National Weather Service survey team confirmed a public report of a tornado near the village of Dane. The EF1 tornado developed just west of STH 113, a little north of the intersection with Reppen Road, and moved east-southeast before dissipating near the intersection of Lee Road and County Road Dam. The tornado caused minor crop damage to a corn field, uprooted trees and snapped large branches, as well as brought a power line down along the path, which averaged 20 yards in width. The EF1 estimated wind speed of 90 mph was based on DI 27 (TH), DOD3. The exact start location is Lat. 43.26637 Lon. -89.52248. The exact end location is Lat 43.26337 Lon -89.49240.</p>				
DODGE COUNTY --- NEOSHO [43.32, -88.52]				
	07/22/10 15:09 CST		0	Funnel Cloud
	07/22/10 15:09 CST		0	Source: Law Enforcement
DANE COUNTY --- 2.9 N YORK CENTER [43.27, -89.07], 4.1 NE YORK CENTER [43.27, -89.01]				
	07/22/10 15:24 CST		0	Tornado (EF0, L: 3.00 mi , W: 30 yd)
	07/22/10 15:30 CST		1K	Source: NWS Storm Survey
<p>An EF0 tornado developed about 5.6 miles east of Bristol, near STH 73 just north of CTH V and moved east-southeast before dissipating just south of the intersection of Kasper Road and Tri-County Road. Sporadic damage to tree limbs and some corn was pushed down, but no structural damage was noted along the path, which averaged 20 yards. The EF-rating was based on DI 27 (TH), DOD2 which suggests maximum winds were around 65 mph. The exact start location is Lat 43.271694 and Lon -89.068583. The exact end location is Lat 43.269639 and Lon -89.008972.</p>				
DODGE COUNTY --- 3.0 W LOWELL [43.33, -88.86]				
	07/22/10 15:35 CST		0	Funnel Cloud
	07/22/10 15:35 CST		0	Source: Trained Spotter
DANE COUNTY --- 1.0 E STOUGHTON [42.92, -89.20]				
	07/22/10 15:46 CST		0	Funnel Cloud
	07/22/10 15:46 CST		0	Source: Law Enforcement
MILWAUKEE COUNTY --- 4.0 W BROWN DEER [43.17, -88.05]				
	07/22/10 16:06 CST		0	Thunderstorm Wind (MG 53 kt)
	07/22/10 16:06 CST		0	Source: Trained Spotter
<p>A trained spotter measured a thunderstorm wind gust at 61 mph (53 knots) 4 miles west of Brown Deer. The wind gusts snapped small trees, with trunks about 6 inches in diameter.</p>				
JEFFERSON COUNTY --- 3.5 SSW WATERLOO [43.14, -89.01], 2.1 NW HOOPERS [43.12, -88.90]				
	07/22/10 16:10 CST		0	Tornado (EF0, L: 5.74 mi , W: 30 yd)
	07/22/10 16:18 CST		0	Source: NWS Storm Survey
<p>An EF0 tornado began about 3.5 miles southwest of Waterloo on Veith Road, about a mile west of the intersection of Velth Road and CTH O. The tornado moved east-southeast before dissipating just east of STH 89, about 2 miles north of the interchange of STH 89 and I-94. Damage was mostly to trees along an intermittent path, which averaged 20 yards in width. No structural damage was found. The EF-rating was based on DI 27 (TH) DOD2 which suggests maximum winds speeds of 65 mph. The exact start location is Lat 43.135917 and Lon -89.013528. The exact end location is 43.120889 and Lon -88.901667.</p>				
SHEBOYGAN COUNTY --- 0.5 WSW PLYMOUTH [43.75, -87.99]				
	07/22/10 16:10 CST		10K	Lightning
	07/22/10 16:10 CST		0	Source: Newspaper

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
A lightning strike to a power pole near Plymouth destroyed insulators and damaged wire conductors, knocking out power to about 500 customers. Power was off to these customers for around 45 minutes.				
JEFFERSON COUNTY --- 3.0 S WATERLOO [43.14, -88.98]				
	07/22/10 16:16 CST		0	Funnel Cloud
	07/22/10 16:16 CST		0	Source: Trained Spotter
JEFFERSON COUNTY --- 1.9 SE FARMINGTON [43.06, -88.65]				
	07/22/10 16:35 CST		0	Tornado (EF0, L: 0.10 mi , W: 30 yd)
	07/22/10 16:36 CST		0	Source: Trained Spotter
A trained spotter saw a brief tornado in a swampy marsh about 1.75 miles southeast of Farmington, about 1/2 mile west of Hillside Drive. The spotter observed a swirling, wispy, water-like spray. Little movement was noted by the spotter before the tornado dissipated. The tornado was given an estimated rating of EF0 with a maximum wind speed of 65 mph. The exact location is Lat 43.05803 and Lon -88.64837.				
DANE COUNTY --- 1.3 NNE HANERVILLE [42.89, -89.16], 0.6 WSW ALBION [42.88, -89.08]				
	07/22/10 17:02 CST		20K	Tornado (EF1, L: 4.18 mi , W: 75 yd)
	07/22/10 17:10 CST		6K	Source: NWS Storm Survey
An EF1 tornado developed about 4.6 miles west-northwest of Albion, about 1/4 mile north of the intersection of Velum Rd. and Leslie Rd., and continued east-southeast about 4 miles before dissipating just north of Bliven Rd around 1 mile east of CTH X near the Jana Airport. The tornado partially uprooted trees, broke large branches, damaged a barn and damaged corn along the path that averaged 45 yards. The maximum path width was 75 yards. The EF1 estimated wind speed of 90 mph was based on DI 27(TH) DOD3. The exact start point is Lat 42.88826 and Lon -89.16181. The exact end point is Lat 42.87732 and Lon 89.08052.				
WAUKESHA COUNTY --- 2.0 N DOWNTOWN WAUKESHA [43.05, -88.22]				
	07/22/10 17:13 CST		0	Thunderstorm Wind (MG 59 kt)
	07/22/10 17:13 CST		0	Source: Amateur Radio
JEFFERSON COUNTY --- 2.4 SSE LAKE KOSHKONONG [42.85, -88.92], 3.9 ESE LAKE KOSHKONONG [42.85, -88.86]				
	07/22/10 17:22 CST		0	Tornado (EF0, L: 2.77 mi , W: 75 yd)
	07/22/10 17:32 CST		0	Source: Trained Spotter
An EF0 tornado developed near the intersection of STH 26 and Rock-Jefferson County Line Rd., about 6.6 miles southwest of Fort Atkinson. The tornado damaged tree limbs along the roughly 2.75 mile path that averaged 40 yards in width. The tornado dissipated about 5.3 miles south of Fort Atkinson, just south of the intersection of Poeppel Rd. and Grogan Rd. The EF0 estimated winds of 75-80 mph were based on DI 27(TH) DOD2. The exact start location is Lat 42.84620 and Lon -88.91638. The exact end location is Lat 42.85381 and Lon -88.86265.				
MILWAUKEE COUNTY --- 0.2 NE WEST MILWAUKEE [43.02, -87.95]				
	07/22/10 17:30 CST		0	Lightning
	07/22/10 17:30 CST	2	0	Source: Newspaper
Two sisters, 25 years old and 30 years old, attempting to run home from a nearby sandwich shop, were injured when struck by lightning. They were taken to a nearby hospital and admitted for treatment of their injuries.				
WALWORTH COUNTY --- 0.8 SSE TROY CENTER [42.81, -88.46]				
	07/22/10 17:31 CST		0	Funnel Cloud
	07/22/10 17:31 CST		0	Source: Fire Department/Rescue
WAUKESHA COUNTY --- 2.0 SSE EAGLE [42.85, -88.45]				
	07/22/10 17:35 CST		0	Funnel Cloud
	07/22/10 17:35 CST		0	Source: Trained Spotter
JEFFERSON COUNTY --- 1.8 SW COLD SPG [42.86, -88.80], 1.8 N WHITEWATER [42.85, -88.72]				
	07/22/10 17:38 CST		0	Tornado (EF0, L: 3.90 mi , W: 75 yd)
	07/22/10 17:45 CST		0	Source: NWS Storm Survey
An EF0 tornado developed about 2.7 miles southwest of Cold Spring, just northwest of the intersection of U.S. Highway 12 and Hoge Rd. The tornado moved east for around 4 miles, ending about 1.6 miles north-northeast of Whitewater, 1/4 mile west of the intersection of STH 59 and CTH D. Damage was limited to large tree branches along the path, which averaged 45 yards. The EF0 estimated wind speed of 65 to 70 mph was based on DI 27(TH) DOD2. The exact start location is Lat 42.85819 and Lon -88.80070. The exact end location is Lat 42.85497 and Lon -88.72386.				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
DANE COUNTY --- 1.7 S MT HOREB [42.98, -89.73], 2.0 SE MT HOREB [42.98, -89.70]				
	07/22/10 17:52 CST		5K	Tornado (EF1, L: 1.46 mi , W: 75 yd)
	07/22/10 17:55 CST		0	Source: NWS Storm Survey
An EF1 tornado developed about 2 miles south of Mt. Horeb, just east of CTH JG about 1/4 mile east of the intersection of Sand Rock Rd. and Barton Rd. The tornado caused minor home damage, knocked trees down and broke tree limbs, uplifted patio pavers, and tumbled a farm wagon along a 1.5 mile path that averaged 50 yards in width. The tornado ended about 2.5 miles southeast of Mt. Horeb, just east of STH 92, about 1 mile north of the intersection of STH 92 and Malone Rd. The EF1 estimated wind speeds of 95 to 100 mph were based on DI 2(FR12) DOD4. The exact start location is Lat 42.97497 and Lon -89.72878. The exact end location is Lat 42.97961 and Lon -89.70055.				
WAUKESHA COUNTY --- 1.1 S BIG BEND [42.86, -88.20], 1.4 SE BIG BEND [42.87, -88.18]				
	07/22/10 18:02 CST		75K	Tornado (EF2, L: 1.00 mi , W: 100 yd)
	07/22/10 18:05 CST		3K	Source: NWS Storm Survey
An EF2 tornado developed about 1 mile south of Big Bend, 1/8 mile west of of STH 164 between Henneberry Ave. and Kelsey Ave. The tornado partially uprooted trees, broke tree branches, caused corn crop damage and destroyed a garage and pole shed along a 1 mile path that averaged 70 yards in width. Additionally, it flipped over a camping trailer and carried a tool box about 1/2 mile away. The tornado ended about 1.7 miles southeast of Big Bend, 1/3 mile east-northeast of the intersection of Crowbar Dr. and Parker Dr. The EF2 estimated wind speeds of 115 to 120 mph were based on DI 27(TH) DOD4. The exact start location is Lat 42.86466 and Lon -88.20040. The exact end location is Lat 42.86569 and Lon -88.18079.				
DANE COUNTY --- 0.2 SW VERONA ARPT [42.98, -89.52], 0.1 E VERONA ARPT [42.98, -89.52]				
	07/22/10 18:10 CST		0	Tornado (EF0, L: 0.22 mi , W: 30 yd)
	07/22/10 18:11 CST		0	Source: NWS Storm Survey
A brief EF0 tornado developed about 1 mile southeast of Verona, just southeast of the intersection of Harvest Ln. and Whalen Rd. The tornado caused minor tree limb damage around Whalen Rd., but no structural damage was noted. The short 0.22 mile path averaged about 15 yards in width. The tornado ended just northeast of the intersection of Whalen Rd. and Gatsby Glenn Dr. The EF0 estimated wind speeds of 65 to 70 mph were based on DI 27(TH) DOD1. The exact start location is Lat 42.97827 and Lon -89.52267. The exact end location is Lat 42.98007 and Lon -89.51900.				
MILWAUKEE COUNTY --- 1.0 ESE OAKWOOD [42.84, -87.91], 1.0 WSW RAWSON [42.85, -87.90]				
	07/22/10 18:55 CST		2K	Thunderstorm Wind (EG 65 kt)
	07/22/10 18:57 CST		0	Source: Trained Spotter
A wet microburst with estimated wind gusts to 75 mph pushed a 25-foot camping trailer several feet, resulting in minor damage. Additionally, a flag-pole was snapped at its base, and several large trees sustained damage to large limbs or trunks.				
GREEN COUNTY --- 1.1 SSW MONROE [42.59, -89.64]				
	07/22/10 19:30 CST		15K	Lightning
	07/22/10 19:30 CST		0	Source: Broadcast Media
A lightning strike to a tree killed 8 cows that had gathered under the tree seeking shelter from a thunderstorm. The value of the cows was between \$12,000 and \$16,000.				
WALWORTH COUNTY --- WHITEWATER [42.83, -88.73]				
	07/22/10 19:32 CST		0	Thunderstorm Wind (EG 52 kt)
	07/22/10 19:40 CST		0	Source: Trained Spotter
A trained spotter estimated thunderstorm wind gusts up to 52 knots (60 mph) that lasted for eight minutes.				
A stalled frontal boundary combined with a moist and unstable atmosphere and strong wind shear to produce numerous tornadoes and funnel clouds over South Central and Southeast Wisconsin. A series of vorticity maxima moving west to east through the western Great Lakes enhanced isentropic lift, as a strengthening southerly low-level jet interacted with a nearly stationary west to east warm front.				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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This map shows the location, EF rating and the path length of each of the 10 tornadoes that occurred in the late afternoon and evening hours of July 22nd. In addition, the core of the damage path caused by thunderstorm wind gusts of 85 to 90 mph in Walworth County between Whitewater Lake and Sugar Creek is also shown.

COLUMBIA COUNTY --- 3.5 WSW PORTAGE ARPT [43.55, -89.54], 3.4 ESE FRIESLAND [43.56, -89.01], 3.6 S COLUMBUS [43.28, -89.03], 3.1 SSW OKEE [43.31, -89.60]

07/22/10 16:00 CST	0.10M	Flash Flood (due to Heavy Rain)
07/22/10 19:00 CST	10K	Source: Law Enforcement

Law enforcement officials reported numerous road closures and culverts damaged due to deep and rushing water over roads from near Portage to Randolph, and south to the Dane County border. Included in these reports was damage to culvert supports in the Harmony Grove subdivision and damage to roads shoulders and driveways along Cactus Acres Road in Lodi; knee-high water covering Henry Drive in Portage. Storm total rainfall reports include 3.68 inches in Lodi; 3.58 inches in Arlington; and 2.58 inches near the Wisconsin Dells, with much of the rain falling within one to two hours of time.

DANE COUNTY --- 0.8 N STONE [42.88, -89.30], 4.2 NNE PRIMROSE [42.95, -89.63], 4.0 E ROXBURY [43.26, -89.59], 1.6 NW YORK CENTER [43.25, -89.09]

07/22/10 16:00 CST	0.10M	Flash Flood (due to Heavy Rain)
07/22/10 20:00 CST	10K	Source: Trained Spotter

Training thunderstorms produced 2.5 to 4.5 inches of rain in about two hours over mainly the northern half of the county. Street flooding stranded cars in Sun Prairie, various locations in the city of Madison, Oregon, Middleton and DeForest. Three to four feet of water covered the intersection of Commercial Avenue and Ckronke Road in Sun Prairie, stalling cars and filling some home basements and commercial buildings with water, that damaged contents.

DODGE COUNTY --- RANDOLPH [43.53, -89.00], 1.3 WNW PORTLAND [43.21, -88.99], 1.2 ENE ALDERLEY [43.22, -88.43], 1.3 ENE HERMAN CENTER [43.43, -88.45]

07/22/10 16:00 CST	20K	Flash Flood (due to Heavy Rain)
07/22/10 19:00 CST	5K	Source: Emergency Manager

Emergency managers reported numerous road closures due to flash flooding in the southern half of the county. Included in the reports were washed out shoulders along roads in the Reeseville and Lowell areas. Law enforcement officials reported street flooding at the intersection of Mill Street and Grant Street, and along Maple Avenue in Beaver Dam made the streets impassable. A trained spotter reported 1.5 to 2 feet of water over the road at the intersection of CTH DJ and CTH E about 3.5 miles southeast of Clyman. Storm total rainfall reports include 3.42 inches at Hustisford; 3.24 inches in Juneau; 2.40 inches in Beaver Dam; and 2.36 in Horicon, with much of the rain falling within one to two hours of time.

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
SHEBOYGAN COUNTY --- 1.6 WSW SHEBOYGAN [43.74, -87.75], 2.5 NNW KOHLER ANDRAE STATE PARK [43.70, -87.72], 2.2 NE ST GEORGE [43.69, -87.75], 1.0 SSE KOHLER [43.72, -87.77]				
	07/22/10 16:30 CST		20K	Flash Flood (due to Heavy Rain)
	07/22/10 19:00 CST		2K	Source: Trained Spotter
A trained spotter reported 3 feet of water over South Business Drive between Riverdale Avenue and Stahl Road in the town of Wilson 5 miles south-southwest of Sheboygan. Another trained spotter reported street flooding on the south side of the city of Sheboygan near the intersection of Weeden Creek road and 10th Street. The flooding damaged the contents of flooded basements and washed out gravel shoulders of roads.				
WASHINGTON COUNTY --- 0.7 SE ST KILIAN [43.54, -88.36], 1.7 E MICHAELS [43.52, -88.14], 1.9 S WEST BEND ARPT [43.39, -88.13], 1.9 NNE SLINGER [43.36, -88.27]				
	07/22/10 16:30 CST		20K	Flash Flood (due to Heavy Rain)
	07/22/10 19:00 CST		2K	Source: Law Enforcement
Police officials closed Clinton Street just west of U.S. Highway 45 in Kewaskum due to flooding. Sandbagging operations were needed on Little Cedar Lake due to rapidly rising lake levels from the heavy rain. Street flooding was reported in West Bend with a trained spotter in town recording 1.77 inches of rain that fell in 25 minutes. A trained spotter in the Barton area about 1.5 miles north of West Bend reported significant flooding on area roads and 6 inches or more of standing water covering the yards of residences in his neighborhood. The floodwater damaged the contents of flooded basements in the area. He recorded 2.03 inches of rain in about 45 minutes. Storm total rainfall amounts include 4.60 inches in Richfield; 4.51 inches at Holy Hill; and Germantown 3.13 inches.				
DANE COUNTY --- DANE [43.25, -89.50], DE FOREST [43.25, -89.33], OREGON [42.93, -89.38], 2.8 SE RILEY [42.99, -89.59]				
	07/22/10 17:00 CST		0.15M	Flash Flood (due to Heavy Rain)
	07/22/10 20:00 CST		10K	Source: Trained Spotter
Training thunderstorms produced 2.5 to 4.5 inches of rain in about two hours over mainly the northern half of the county. Street flooding stranded cars in Sun Prairie, various locations in the city of Madison, Oregon, Middleton and DeForest. Three to four feet of water covered the intersection of Commercial Avenue and Ckronke Road in Sun Prairie, stalling cars and filling some home basements and commercial buildings with water, damaging their contents.				
MILWAUKEE COUNTY --- 0.8 NW GRANVILLE [43.19, -88.06], 1.6 NNW FOX PT [43.19, -87.90], 2.5 E RAWSON [42.85, -87.83], 1.0 SE FRANKLIN [42.86, -88.07]				
	07/22/10 17:00 CST	1	24.10M	Flash Flood (due to Heavy Rain)
	07/22/10 23:00 CST		10K	Source: Emergency Manager

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Thunderstorms training over the region produced flooding rains over all of Milwaukee County...causing massive flooding, shutting down streets and the freeway system at rush hour with up to 4 feet of rushing water.				
There was one fatality - the body of a 19-year-old male was found in Lincoln Creek near N. 32nd St. and W. Hampton Ave. in Milwaukee. He was swept from his vehicle when Lincoln Creek flooded.				
County Executive Scott Walker issued a Declaration of a Major Disaster for Milwaukee County since more than 7 inches of rain fell around the county, and an estimated \$24.1 million in damage in the private sector, and nearly \$11.6 million in public sector costs, which includes protective measures and clean-up costs.				
The private sector damage costs include: \$22,396,790 dollars to residential buildings and \$1,686,752 dollars to businesses. The public sector costs include: \$2,003,010 dollars of damage to public buildings and equipment; \$2,385,760 dollars of damage to public utility systems; \$2,774,400 dollars or damage to road systems; \$310,000 dollars of damage to water control facilities and another \$1,326,100 dollars in damage to other public property for a total of \$8,799,270. In addition, another \$1,946,100 dollars were spent in debris clearance and \$894,988 dollars were spent for overtime. These costs are not directly related to the flood damage.				
The Milwaukee Fire Department logged 50 rescues from homes and streets.				
The Milwaukee Metropolitan Sewerage District (MMSD) reported that the storm resulted in a combined sewer overflow of around 2 billion gallons. All Lake Michigan beaches in Milwaukee were closed through the following weekend of July 24th and 25th due to sewer contamination. The City of Milwaukee received at least 2000 calls for sewer backups into basements of homes. It appeared that the northern half of the city of Milwaukee was hardest hit.				
The flooding rains created a massive sink hole 20 feet deep and some 20 to 40 feet wide at the intersection of Oakland and North in the city of Milwaukee around 830 pm. It swallowed a Sport Utility Vehicle and a street light. The driver of the SUV was injured and treated at a hospital. Electrical power cables and other cable lines were damaged by the sink hole.				
Milwaukee Mitchell International Airport was closed late Thursday night (July 22nd) through 2 pm Friday (July 23rd) due to flooded runways. One runway was opened at 2 pm Friday, however there were additional delays.				
In Milwaukee County, over 4,400 homes reported water-filled basements in the city of Milwaukee alone.				
11,764 homes received some sort of impact from the flooding, with 6 homes destroyed; 57 homes receiving major damage; 1,859 home receiving minor damage; and an additional 9,842 homes minimally affected by the flood waters. Sixty-eight businesses were affected, with 9 having major damage and 59 having minor damage.				
The north side of the city received the heaviest downpours with 7 to 8 inches of rain falling in 2 to 3 hours. WTMJ-TV4 on Milwaukee's northeast side measured 6.73 inches of rain in 1 hour, between 5:15 pm and 6:15 pm. The twenty-four hour rainfall (midnight to midnight July 22nd) was 8.31 inches. They also received another inch of rain after midnight on July 23rd, so the two-day total was 9.31 inches.				
The Milwaukee Fire Department logged 50 rescues from homes and streets.				
Nicolet High School in the north suburban community of Glendale had a completely flooded basement and 16" of water on the main floor.				
Hourly rainfall amounts of 2 to 4 inches were reported, and WTMJ TV-4 on Milwaukee's northeast side measured 7 inches of rain in about 2.5 hours ending at 745 pm Thursday evening. The one-hour rainfall was 6.73 inches between 5:15 PM and 6:15 PM CDT in the late afternoon/evening. The twenty-four hour rainfall (midnight to midnight July 22nd) was 8.31 inches, with another inch after midnight on July 23rd, so the two day total was 9.31 inches.				
Mitchell Field recorded 5.61 inches for the day, breaking a record for the date. The previous record was 1.26 set in 1948. This also is the second highest daily rainfall total on record for Milwaukee. The greatest one-day precipitation record was the 6.81 inches which fell on August 6, 1986.				
Direct Fatalities: M19VE				

OZAUKEE COUNTY --- 1.8 SSW FIVE CORNERS [43.30, -88.02], 2.3 ESE GRAFTON [43.30, -87.91], 2.0 SW BAYSIDE [43.20, -87.91], 2.0 SSE MEQUON [43.19, -87.96]

07/22/10 17:00 CST	20K	Flash Flood (due to Heavy Rain)
07/22/10 19:00 CST	1K	Source: Law Enforcement

Police reported runoff from heavy rains caused a few sewer backups in homes causing damage to contents in Mequon. Police also reported water over roads in Cedarburg, draining with enough force to pop off a manhole cover near the high school. Law enforcement also closed I-43 at both Mequon Road and County Line Road, mainly due to impassable conditions due to flooding just over the county line in Milwaukee. Thiensville officials reported 2.85 inches of rain in less than 2 hours, while Mequon received 2.84 inches.

JEFFERSON COUNTY --- WATERTOWN [43.20, -88.72], 0.6 N IXONIA [43.16, -88.60], 1.9 NNE WHITEWATER [42.86, -88.72], 1.9 NNE BUSSEYVILLE [42.92, -88.97], 1.9 NNE WATERLOO [43.20, -88.97]

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/22/10 18:00 CST		0.15M	Flash Flood (due to Heavy Rain)
	07/22/10 20:00 CST		10K	Source: Newspaper

Training thunderstorms produced 3 to 5 inches of rain in two hours or less across mainly the northern two-thirds of the county. Many roads were rendered impassable for a time due to the heavy downpours. Localized flooding of roads and some basements, with damage to contents, were reported by the county emergency manager in Waterloo, Watertown, Lake Mills, Jefferson, Ixonia and Johnson Creek. STH 19 was closed east of Watertown due to high water over the road. Some storm total rainfall reports include 5.45 inches at Palmyra; 4.97 inches in Milford; 4.70 inches at the National Weather Service office in Sullivan; and 4.59 inches in Waterloo.

RACINE COUNTY --- 1.9 E HONEY LAKE [42.73, -88.28], 1.4 SE CALDWELL [42.81, -88.25], CALEDONIA [42.80, -87.93], 0.7 SSW FRANKSVILLE [42.74, -87.92]

07/22/10 18:00 CST	20K	Flash Flood (due to Heavy Rain)
07/22/10 20:00 CST	1K	Source: Trained Spotter

The southern edge of a line of training thunderstorms pushed across northern portions of Racine County, producing between 3 and 4 inches of rain in two hours or less. water covering area roads made them impassable, including CTH G at I-94, with the flood waters washing out gravel shoulders. Basements flooded, causing damage to contents, including the basement of a home on Spring Street on the northwest side of the city of Racine, flooded with water from the swollen Root River.

WAUKESHA COUNTY --- 0.7 NNE MENOMONEE FALLS [43.19, -88.10], 1.6 SSW DURHAM [42.85, -88.09], 3.6 W EAGLE [42.88, -88.54], 1.6 WNW LAC LA BELLE [43.16, -88.55]

07/22/10 18:00 CST	2.90M	Flash Flood (due to Heavy Rain)
07/22/10 20:00 CST	50K	Source: Emergency Manager

Thunderstorms training over the region produced 4 to 7 inches of rain over Waukesha County. While many sections of the county experienced flash flooding, the north and northeast sections were hardest hit, with numerous roads flooded and basements flooded in Brookfield, Menomonee Falls and Sussex. A trained spotter reported 4 inches of rain in one hour in Menomonee Falls where the heavy rains caused a sink hole to form on Campbell Drive. Rushing water flooded roads in Delafield near U.S. Highway 18, closed STH 59 at STH 164 south of Waukesha, and covered sections of CTH Z, west of Eagle in western Waukesha County. Flooded roads were also reported in Muskego, New Berlin and Oconomowoc.

Parts of south-central and southeast Wisconsin experienced several rounds of record-setting torrential heavy rains during the afternoon and evening hours of July 22, 2010 that led to flash flooding and damage. During the afternoon, a persistent band of strong to severe thunderstorms developed and moved very slowly over south central and southeast Wisconsin through the evening hours. The individual storms were moving quite fast, about 40 to 50 mph, but the slow southward movement of the boundary these storms were developing along, resulted in storms repeatedly training, or moving, over the same area.

Widespread 3 to 4 inch amounts were reported along and either side of the I-94 corridor, with locally higher amounts of 5 to 8 inches. The greatest rain amounts fell in Milwaukee County. Mitchell Field recorded 5.61 inches for the day, breaking a record for the date. The previous record was 1.26 set in 1948. This also is the second highest daily rainfall total on record for Milwaukee. The greatest one-day precipitation record was the 6.81 inches which fell on August 6, 1986. Madison also set a record for precipitation for the date at 3.62 inches. This beat the previous mark of 2.21 inches set in 1885. The 3.62 inches of rainfall ranks 13th for the most precipitation received in one day. The record is the 4.96 inches which fell on August 8, 1906.

About 32,000 We Energy utility customers lost electrical power throughout southeast Wisconsin due to the flooding and lightning.

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	08/20/10 16:00 CST		0	Marine Thunderstorm Wind (MG 50 kt)
	08/20/10 16:00 CST		0	Source: C-MAN Station
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	08/20/10 16:11 CST		0	Marine Thunderstorm Wind (MG 43 kt)
	08/20/10 16:20 CST		0	Source: C-MAN Station
Frequent gusts to 43 knots for a nine minute period.				
A line of strong thunderstorms with a history of producing widespread damaging wind gusts over the land affected the nearshore waters of Lake Michigan north of Milwaukee.				
WISCONSIN, Southeast				
(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z069) ROCK				
	08/01/10 00:00 CST		0	Dense Fog
	08/01/10 08:00 CST		0	
Light winds, clear skies and a humid air mass over the region led to the formation of dense fog over most of South Central and Southeast Wisconsin. Many areas saw dense fog mainly between the hours of 2 am and 9 am CDT on August 1st, though Sheboygan County saw visibilities drop to 1/4 mile or less around 11 pm CDT on July 31st.				
IOWA COUNTY --- 2.5 NW DODGEVILLE [43.00, -90.17]				
	08/09/10 00:45 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/10 00:45 CST		0	Source: Law Enforcement
Sheriff deputies reported large trees were blown down by thunderstorm wind gusts estimated up to 56 knots (65 mph).				
SAUK COUNTY --- LOGANVILLE [43.43, -90.03], NORTH FREEDOM [43.47, -89.87]				
	08/09/10 01:00 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/10 01:10 CST		0	Source: Law Enforcement
Sheriff deputies reported extensive trees damage from thunderstorm wind gusts estimated at 65 knots (75 mph).				
IOWA COUNTY --- MINERAL PT [42.85, -90.18], HOLLANDALE [42.87, -89.93]				
	08/09/10 01:03 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/10 01:03 CST		0	Source: Law Enforcement
Sheriff deputies reported large trees down over many locations across eastern Iowa County from damaging thunderstorm wind gusts.				
COLUMBIA COUNTY --- 3.0 W LODI [43.32, -89.58], ARLINGTON [43.33, -89.37]				
	08/09/10 01:25 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/10 01:33 CST		0	Source: Law Enforcement
Sheriff deputies reported sporadic damage to large trees from damaging thunderstorm wind gusts estimated at 65 knots (75 mph).				
DANE COUNTY --- 4.0 NNE VERONA [43.03, -89.50], FITCHBURG [42.95, -89.47]				
	08/09/10 01:26 CST		10K	Thunderstorm Wind (EG 65 kt)
	08/09/10 01:26 CST		0	Source: Law Enforcement
Sheriff deputies reported large trees and power lines blown down from damaging thunderstorm wind gusts estimated at 65 knots (75 mph).				
MARQUETTE COUNTY --- 4.5 NNW WESTFIELD [43.94, -89.52]				
	08/09/10 01:30 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/10 01:30 CST		0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Sheriff deputies reported damage to large trees from thunderstorm wind gusts estimated at 56 knots (64 mph).				

DANE COUNTY --- MIDDLETON [43.10, -89.50]

08/09/10 01:34 CST	2K	Thunderstorm Wind (EG 65 kt)
08/09/10 01:34 CST	0	Source: Law Enforcement

Sheriff deputies reported large trees blown down from damaging thunderstorm wind gusts estimated at 65 knots (75 mph). A large tree fell on a house in the 7000 block of Sagebrush Trail, resulting in minor damage.

COLUMBIA COUNTY --- RIO [43.45, -89.23], 4.0 SE CAMBRIA [43.51, -89.04]

08/09/10 01:52 CST	0	Thunderstorm Wind (EG 56 kt)
08/09/10 02:10 CST	0	Source: Law Enforcement

Sheriff deputies reported sporadic tree damage from thunderstorm wind gusts estimated at 56 knots (65 mph).

ROCK COUNTY --- EDGERTON [42.83, -89.07]

08/09/10 01:55 CST	0	Thunderstorm Wind (EG 65 kt)
08/09/10 02:05 CST	0	Source: Law Enforcement

Police officials reported tree damage and building damage from thunderstorm wind gusts estimated at 65 knots (75 mph).

JEFFERSON COUNTY --- 3.0 SW LAKE MILLS [43.05, -88.94], 5.0 ENE LAKE MILLS [43.11, -88.81]

08/09/10 02:00 CST	0	Thunderstorm Wind (EG 65 kt)
08/09/10 02:10 CST	0	Source: Law Enforcement

Police officials reported considerable tree damage from thunderstorm wind gusts estimated at 65 knots (75 mph).

WAUKESHA COUNTY --- DOUSMAN [43.02, -88.47], NASHOTAH [43.10, -88.40]

08/09/10 02:30 CST	0	Thunderstorm Wind (EG 56 kt)
08/09/10 02:40 CST	0	Source: Law Enforcement

Police officials reported trees and power lines blown down from damaging thunderstorm wind gusts estimated at 56 knots (65 mph).

WASHINGTON COUNTY --- WEST BEND [43.42, -88.18], JACKSON [43.32, -88.17]

08/09/10 02:50 CST	0	Thunderstorm Wind (EG 56 kt)
08/09/10 02:55 CST	0	Source: Law Enforcement

Police officials reported considerable tree damage from thunderstorm wind gusts estimated at 56 knots (65 mph). The AWOS at West Bend airport recorded a 60 mph (52 knot) wind gust at 350 am CDT.

MILWAUKEE COUNTY --- 1.0 SW MILWAUKEE TIMMERMAN AIRPORT [43.10, -88.04]

08/09/10 03:00 CST	0	Thunderstorm Wind (EG 54 kt)
08/09/10 03:00 CST	0	Source: Law Enforcement

Police officials reported trees blown down from damaging thunderstorm wind gusts. A mesonet site on the campus of Divine Savior-Holy Angels High School measured a thunderstorm wind gust of 62 mph (54 knots) at 4 am CDT.

An upper level short wave trough moved rapidly eastward across the Upper Mississippi River Valley and into Wisconsin during the early morning hours of August 9th. The approaching short wave backed low level winds to the south, which brought a moist, unstable air mass into the region with CAPE values of 2000 to 3000 J/kg. A linear mesoscale convective system developed over Nebraska and moved eastward across northern Iowa on the nose of the 30-35 knot low-level winds. This system moved into Wisconsin shortly after 1 am CDT, with the bowing line of storms producing damaging winds along a 10-mile-wide path as it moved rapidly from west to east across South Central and Southeast Wisconsin. The line of thunderstorms extensively damaged trees and downed power lines, including knocking out electrical power to 1,300 Alliant Energy customers in eastern Sauk County and northwest Dane County. Madison Gas and Electric Company reported about 4,000 of their customers lost power on the southwest side of Madison.

(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH

08/11/10 11:00 CST	0	Heat
08/11/10 18:00 CST	0	

Southwest winds between departing high pressure to the east of Wisconsin and low pressure developing over the Dakotas brought a moist Gulf air mass into the area as temperatures warmed into the low to mid 90's. The warm temperatures combined with dew points in the lower to middle 70s to produce Heat Index values of 100-104 degrees across parts of southern Wisconsin, including the counties

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
of Iowa, Dane, Jefferson, Lafayette, Green, Rock and Walworth.				
(WI-Z052) SHEBOYGAN				
	08/12/10 01:00 CST		0	Dense Fog
	08/12/10 04:00 CST		0	
Increasing low-level moisture and good radiational cooling conditions led to the formation of dense fog over portions of southern Wisconsin. The dense fog was most concentrated over Sheboygan County where visibilities fell to a 1/4 mile or less during the early morning hours of August 12th.				
SAUK COUNTY --- IRONTON [43.55, -90.13], 3.0 NE LOGANVILLE [43.46, -89.99], 3.0 SE LOGANVILLE [43.40, -89.99], 2.0 W HILLPT [43.42, -90.16]				
	08/13/10 11:15 CST		10K	Flash Flood (due to Heavy Rain)
	08/13/10 14:00 CST		0	Source: Newspaper
Several rounds of thunderstorms produced heavy rain that closed numerous roads, with 1 to 3 feet of water covering the roadways and washing out gravel shoulders. In addition, the thunderstorms knocked over a tree onto power lines that started a small fire along Highway 136 near North Freedom.				
COLUMBIA COUNTY --- 4.8 N OKEE [43.42, -89.59], 5.0 W DEKORRA [43.46, -89.57], 3.0 NW DEKORRA [43.50, -89.51], 2.0 NW DEKORRA [43.49, -89.50]				
	08/13/10 12:10 CST		0.13M	Flash Flood (due to Heavy Rain)
	08/13/10 13:30 CST		0	Source: Newspaper
Several rounds of thunderstorms produced heavy rain that closed numerous roads in Caledonia Township, west of the Wisconsin River and southwest of the city of Portage. The rushing water damaged roadways and washed out gravel shoulders, as well as causing damage to private driveways.				
Repeated rounds of thunderstorms with heavy rain caused flash flooding in Sauk and Columbia counties. The thunderstorms developed ahead of a warm front, as a low-level jet pushed warm, moist air over the boundary. Surface temperatures in the low to mid 80's, along with moist dew points in the low 70's, contributed to the instability needed for the thunderstorms as well as provided ample moisture for the heavy rain. Precipitable water values were over 2 inches. National Weather Service Doppler radar estimated 5 to 6 inches of rain fell in extreme northwest Sauk County.				
GREEN LAKE COUNTY --- 3.7 SSW BERLIN [43.92, -88.96], BERLIN [43.97, -88.93]				
	08/20/10 14:07 CST		0.10M	Thunderstorm Wind (EG 50 kt)
	08/20/10 14:15 CST		2K	Source: County Official
County officials reported a tree fell through a house in Berlin. Power lines were reported down by the strong thunderstorm gusts, as well as minor crop damage.				
GREEN COUNTY --- BRODHEAD [42.62, -89.37]				
	08/20/10 14:35 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 14:35 CST		0	Source: Law Enforcement
County sheriff deputies reported trees and power lines were blown down by the strong thunderstorm gusts.				
JEFFERSON COUNTY --- WHITEWATER [42.83, -88.73], 4.0 W PALMYRA [42.88, -88.68]				
	08/20/10 14:45 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:30 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down in and around the city of Whitewater to just west of Palmyra by the strong thunderstorm gusts. The damage was produced by three separate storms that trained over the area. There was also urban flooding in Whitewater and Palmyra caused by 2 inches of rain that fell in 45 minutes.				
ROCK COUNTY --- 2.0 SW DOWNTOWN JANESVILLE [42.66, -89.05], 2.0 NE DOWNTOWN JANESVILLE [42.70, -88.99]				
	08/20/10 14:45 CST		0	Thunderstorm Wind (MG 50 kt)
	08/20/10 14:50 CST		0	Source: Law Enforcement
County sheriff deputies reported trees and power lines were blown down by the strong thunderstorm gusts. The AWOS at Janesville airport recorded a 58 mph (50 knot) wind gust at 345 pm CDT.				
DANE COUNTY --- STOUGHTON [42.92, -89.22]				
	08/20/10 14:57 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:05 CST		0	Source: Law Enforcement
County sheriff deputies reported trees and power lines were blown down by the strong thunderstorm gusts.				

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
JEFFERSON COUNTY --- FT ATKINSON [42.93, -88.85]				
	08/20/10 15:15 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:15 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down by the strong thunderstorm gusts.				
SAUK COUNTY --- 8.0 W LA VALLE [43.58, -90.29], 3.0 E LA VALLE [43.58, -90.07]				
	08/20/10 15:18 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:18 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down by the strong thunderstorm gusts.				
JEFFERSON COUNTY --- 4.0 NW LAKE MILLS [43.12, -88.96], WATERTOWN [43.20, -88.72]				
	08/20/10 15:25 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:30 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down by the strong thunderstorm gusts.				
WAUKESHA COUNTY --- STONEBANK [43.15, -88.42]				
	08/20/10 15:28 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:28 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down by the strong thunderstorm gusts.				
JEFFERSON COUNTY --- 3.7 NE OAK HILL [42.97, -88.55]				
	08/20/10 15:36 CST		0	Thunderstorm Wind (MG 50 kt)
	08/20/10 15:36 CST		0	Source: Official NWS Observations
The peak thunderstorm wind gust of 58 mph (50 knots) measured at the National Weather Service office southeast of Sullivan.				
DODGE COUNTY --- LOWELL [43.33, -88.80]				
	08/20/10 15:40 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:40 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down in the Lowell area by the strong thunderstorm gusts.				
WASHINGTON COUNTY --- SLINGER [43.33, -88.28]				
	08/20/10 15:45 CST		0	Thunderstorm Wind (MG 53 kt)
	08/20/10 15:45 CST		0	Source: Mesonet
The peak thunderstorm wind gust of 61 mph (53 knots) was measured at a mesonet site in Slinger.				
DODGE COUNTY --- HORICON [43.45, -88.63], 3.0 W LOMIRA [43.58, -88.49]				
	08/20/10 15:50 CST		0	Thunderstorm Wind (EG 50 kt)
	08/20/10 15:50 CST		0	Source: Law Enforcement
County sheriff deputies reported trees were blown down by the strong thunderstorm gusts.				
SHEBOYGAN COUNTY --- OOSTBURG [43.62, -87.80], SHEBOYGAN [43.75, -87.72]				
	08/20/10 15:52 CST		0	Thunderstorm Wind (EG 52 kt)
	08/20/10 16:00 CST		0	Source: Law Enforcement
County Sheriff deputies reported tree damage due to thunderstorm wind gusts along a path from Oostburg to the city of Sheboygan. The Sheboygan C-MAN observation site at the harbor recorded a 49 knot (56 mph) wind gust at 5 pm CDT.				
WAUKESHA COUNTY --- 3.0 SE PEWAUKEE [43.05, -88.23]				
	08/20/10 16:00 CST		0	Thunderstorm Wind (MG 56 kt)
	08/20/10 16:00 CST		0	Source: Trained Spotter
The peak thunderstorm wind gust of 65 mph (56 knots) measured by a trained spotter.				

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WASHINGTON COUNTY --- WEST BEND [43.42, -88.18]				
	08/20/10 16:01 CST		0	Thunderstorm Wind (MG 64 kt)
	08/20/10 16:01 CST		0	Source: Mesonet
The peak thunderstorm wind gust of 74 mph (64 knots) was measured by a trained spotter in West Bend.				
FOND DU LAC COUNTY --- 0.5 NW EDEN [43.71, -88.38]				
	08/20/10 16:10 CST		75K	Thunderstorm Wind (EG 50 kt)
	08/20/10 16:10 CST		0	Source: Law Enforcement
Law enforcement officials reported a 100-year old barn was blown down by thunderstorm wind gusts estimated at 50 knots (58 mph).				
MARQUETTE COUNTY --- OXFORD [43.78, -89.57]				
	08/20/10 16:10 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:10 CST		0	Source: Amateur Radio
An amateur radio operator reported tree damage and power lines blown down onto a home in Oxford by thunderstorm wind gusts estimated at 56 knots (65 mph).				
COLUMBIA COUNTY --- 5.0 N PARDEEVILLE [43.60, -89.28]				
	08/20/10 16:25 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:25 CST		0	Source: Emergency Manager
The Columbia County emergency manager reported tree damage caused by thunderstorm wind gusts estimated at 56 knots (65 mph).				
SHEBOYGAN COUNTY --- 2.5 W RANDOM LAKE [43.55, -88.02]				
	08/20/10 16:25 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:25 CST		0	Source: Fire Department/Rescue
Fire officials reported tree damage by thunderstorm wind gusts estimated at 56 knots (65 mph).				
FOND DU LAC COUNTY --- 3.0 SE CAMPBELLSPORT [43.57, -88.24]				
	08/20/10 16:30 CST		0	Thunderstorm Wind (EG 70 kt)
	08/20/10 16:30 CST		0	Source: Law Enforcement
Law enforcement officials reported shingles blown off a home and tree damage by thunderstorm wind gusts estimated at 70 knots (81 mph).				
GREEN LAKE COUNTY --- DALTON [43.65, -89.20]				
	08/20/10 16:30 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:30 CST		0	Source: Emergency Manager
The Green Lake County emergency manager reported tree damage caused by thunderstorm wind gusts estimated at 56 knots (65 mph).				
SHEBOYGAN COUNTY --- WALDO [43.67, -87.95]				
	08/20/10 16:30 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:30 CST		0	Source: Fire Department/Rescue
Fire officials reported tree damage by thunderstorm wind gusts estimated at 56 knots (65 mph).				
WALWORTH COUNTY --- 0.5 SE WALWORTH [42.52, -88.59]				
	08/20/10 16:30 CST		25K	Thunderstorm Wind (EG 50 kt)
	08/20/10 16:30 CST		0	Source: Emergency Manager
The Walworth County Emergency Manager reported a pole barn was partially damaged by thunderstorm winds estimated at 50 knots (58 mph).				
WALWORTH COUNTY --- 2.0 S DELAVAN [42.60, -88.63]				
	08/20/10 16:37 CST		25K	Thunderstorm Wind (EG 50 kt)
	08/20/10 16:41 CST		0	Source: Emergency Manager
The Walworth County Emergency Manager reported tree damage caused by thunderstorm winds estimated at 50 knots (58 mph).				

Storm Data and Unusual Weather Phenomena - August 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
OZAUKEE COUNTY --- PORT WASHINGTON [43.38, -87.87]				
	08/20/10 16:38 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:38 CST		0	Source: Law Enforcement
Law enforcement officials reported tree damage by thunderstorm wind gusts estimated at 56 knots (65 mph).				
GREEN LAKE COUNTY --- 1.5 ESE GREEN LAKE [43.82, -88.92], 2.5 ENE GREEN LAKE [43.84, -88.90]				
	08/20/10 16:40 CST		0	Thunderstorm Wind (EG 87 kt)
	08/20/10 16:42 CST		0	Source: NWS Storm Survey
Based on a report from county emergency managers, an NWS storm survey team determined damage located near the northeast shore of Green Lake was caused by microburst winds estimated at 100 mph (81 knots). Eight homes, a boat and two piers were damaged by the winds. Four dozen trees were uprooted or snapped along the path of the microburst winds.				
SHEBOYGAN COUNTY --- SHEBOYGAN FALLS [43.73, -87.82], KOHLER [43.73, -87.78]				
	08/20/10 16:40 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:40 CST		0	Source: Fire Department/Rescue
Fire officials reported tree damage by thunderstorm wind gusts estimated at 56 knots (65 mph).				
SHEBOYGAN COUNTY --- HOWARDS GROVE [43.83, -87.82]				
	08/20/10 16:45 CST		0	Thunderstorm Wind (EG 56 kt)
	08/20/10 16:45 CST		0	Source: Fire Department/Rescue
Fire officials reported tree damage by thunderstorm wind gusts estimated at 56 knots (65 mph).				
A short wave moving up the leading flank of an elongated large-scale trough that extended from the Upper Mississippi River Valley to the Central Plains provided large-scale lift for thunderstorm development over southern Wisconsin. A warm front extended across central Wisconsin back to surface low pressure over west-central Minnesota. This placed southern Wisconsin in a warm humid air mass, with temperatures in the 80's and dew points in the lower 70's producing CAPE values reaching 2000 J/kg. Deep-layer shear profiles were favorable for supercells as well as multicell line segments that produced damaging wind gusts. The thunderstorm winds caused widespread tree and power line damage. WE energies reported 23,000 customers were without power.				
(WI-Z058) DODGE				
	08/22/10 03:00 CST		0	Dense Fog
	08/22/10 07:00 CST		0	

Light winds and a lingering humid air mass over the region led to the formation of dense fog over a small part of Southeast Wisconsin. While many areas saw visibilities fall to 1/2 mile to 1 mile, only Dodge County experienced dense fog with visibilities of 1/8 to 1/4 mile.

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
PT WASHINGTON TO NORTH PT LT WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	09/02/10 18:44 CST		0	Marine Thunderstorm Wind (MG 36 kt)
	09/02/10 18:44 CST		0	Source: C-MAN Station
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	09/02/10 18:44 CST		0	Marine Thunderstorm Wind (MG 36 kt)
	09/02/10 18:44 CST		0	Source: C-MAN Station
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	09/02/10 20:00 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	09/02/10 20:00 CST		0	Source: C-MAN Station
A broken line of strong to severe thunderstorms affected the nearshore waters of Lake Michigan during the early evening.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	09/21/10 17:20 CST		0	Marine Thunderstorm Wind (MG 39 kt)
	09/21/10 17:20 CST		0	Source: C-MAN Station
A line of strong thunderstorms triggered by a passing cold front affected portions of the nearshore waters during the late afternoon and early evening.				
WISCONSIN, Southeast				
IOWA COUNTY --- 5.0 N MINERAL PT [42.92, -90.18]				
	09/02/10 16:20 CST		0	Thunderstorm Wind (EG 56 kt)
	09/02/10 16:20 CST		0	Source: Law Enforcement
Sheriff deputies reported 5 to 6 large trees were blown down by strong thunderstorm wind gusts estimated at 56 knots (65 mph) north of Mineral Point on Union Ridge.				
DANE COUNTY --- STOUGHTON [42.92, -89.22], DEERFIELD [43.05, -89.07]				
	09/02/10 17:32 CST		1K	Thunderstorm Wind (EG 56 kt)
	09/02/10 17:35 CST		0	Source: Trained Spotter
A trained spotter reported trees blown down by strong thunderstorm wind gusts estimated at 56 knots (65 mph) along a path from Stoughton to Deerfield. A 3-foot diameter tree fell on a truck in Stoughton. Damage amount is estimated.				
JEFFERSON COUNTY --- LAKE MILLS [43.08, -88.90], 2.4 E CAMBRIDGE ARPT [42.98, -88.95]				
	09/02/10 17:40 CST		0	Thunderstorm Wind (EG 56 kt)
	09/02/10 17:45 CST		0	Source: Law Enforcement
Sheriff deputies reported trees blown down by strong thunderstorm wind gusts estimated at 56 knots (65 mph) along a line from Lake Mills to Oakland Township.				
JEFFERSON COUNTY --- 1.0 N JEFFERSON [43.01, -88.80]				
	09/02/10 17:49 CST		0	Thunderstorm Wind (EG 56 kt)
	09/02/10 17:49 CST		0	Source: NWS Employee
A National Weather Service employee reported a thunderstorm wind gust estimated at 56 knots (65 mph).				
WASHINGTON COUNTY --- 1.0 NW HARTFORD [43.33, -88.39], WEST BEND [43.42, -88.18]				
	09/02/10 18:00 CST		20K	Thunderstorm Wind (EG 65 kt)
	09/02/10 18:15 CST		0	Source: Fire Department/Rescue
Fire officials reported trees blown down and damage to the roofs of two commercial buildings near Hartford by thunderstorm wind gusts estimated at 65 knots (75 mph). Damage amount is estimated.				

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WAUKESHA COUNTY --- 1.0 SW OCONOMOWOC [43.11, -88.49]				
	09/02/10 18:02 CST		0	Hail (0.88 in)
	09/02/10 18:02 CST		0	Source: NWS Employee
WAUKESHA COUNTY --- NASHOTAH [43.10, -88.40], SUSSEX [43.13, -88.22]				
	09/02/10 18:15 CST		0	Thunderstorm Wind (EG 70 kt)
	09/02/10 18:20 CST		0	Source: Law Enforcement
Law enforcement officials reported trees and power lines blown down by thunderstorm wind gusts estimated at 70 knots (81 mph).				
WAUKESHA COUNTY --- OCONOMOWOC [43.12, -88.48]				
	09/02/10 18:15 CST		0	Hail (0.88 in)
	09/02/10 18:15 CST		0	Source: Trained Spotter
OZAUKEE COUNTY --- SAUKVILLE [43.38, -87.93]				
	09/02/10 18:35 CST		0	Thunderstorm Wind (EG 65 kt)
	09/02/10 18:35 CST		0	Source: Emergency Manager
The Ozaukee County Emergency Manager reported trees blown down by thunderstorm wind gusts estimated at 65 knots (75 mph). Two houses had siding damage from the gusty winds, with one home having a brick facade peeled away.				
A strong cold front swept across Wisconsin, being driven by an amplifying short wave trough moving east from the Plains, that produced a strong area of low pressure north of Lake Superior. The front interacted with a warm and unstable air mass, with CAPE values between 1500 J/kg and 2000 J/kg, bringing severe thunderstorms to southern Wisconsin in the late afternoon and early evening hours. Strong deep layer shear led to the development of a line of thunderstorms with damaging wind gusts. Heavy rain with the thunderstorms produced 1 to 2 inch per hour rainfall amounts that briefly flooded streets and parking lots, especially on the southwest side of Madison, Verona and Fitchburg in Dane County. The heavy downpours and lightning forced officials to cancel a cross country meet in DeForest, also in Dane County. There were also a few reports of near-severe nickel-sized hail.				
DODGE COUNTY --- 1.0 NE BEAVER DAM [43.48, -88.82]				
	09/06/10 05:28 CST		0	Hail (1.25 in)
	09/06/10 05:28 CST		0	Source: Law Enforcement
Sheriff deputies reported half dollar-sized hail northeast of Beaver Dam.				
JEFFERSON COUNTY --- 3.0 NE CONCORD [43.10, -88.56]				
	09/06/10 06:17 CST		0	Hail (0.88 in)
	09/06/10 06:17 CST		0	Source: NWS Employee
MILWAUKEE COUNTY --- 0.6 NW BROWN DEER [43.18, -87.98]				
	09/06/10 06:30 CST		3K	Lightning
	09/06/10 06:30 CST		0	Source: Emergency Manager
Damage to an antenna and minor electrical damage due to a lightning strike to a residence was reported by the county emergency manager.				
DODGE COUNTY --- WAUPUN [43.63, -88.73]				
	09/06/10 06:45 CST		0	Hail (1.00 in)
	09/06/10 06:45 CST		0	Source: Trained Spotter
A trained spotter reported quarter-sized hail in Waupun.				
WAUKESHA COUNTY --- 1.0 S DOWNTOWN WAUKESHA [43.01, -88.22], 1.0 SE DOWNTOWN WAUKESHA [43.01, -88.21]				
	09/06/10 07:25 CST		0	Hail (1.75 in)
	09/06/10 07:30 CST		0	Source: Amateur Radio
Amateur radio operators and the public reported hail ranging from 1 inch in diameter to 1.75 inches in diameter along a path from south of the city of Waukesha, through the city, to the southeast of downtown.				
WAUKESHA COUNTY --- 1.0 NW DOWNTOWN WAUKESHA [43.03, -88.23]				
	09/06/10 07:26 CST		0	Hail (0.75 in)
	09/06/10 07:26 CST		0	Source: Amateur Radio

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MILWAUKEE COUNTY --- 3.0 S DOWNTOWN MILWAUKEE [42.99, -87.97]				
	09/06/10 07:43 CST		0	Hail (0.88 in)
	09/06/10 07:43 CST		0	Source: Trained Spotter
MILWAUKEE COUNTY --- 1.0 S WEST ALLIS [42.99, -87.97]				
	09/06/10 07:45 CST		0	Hail (1.00 in)
	09/06/10 07:45 CST		0	Source: Public
The public reported 1 inch-diameter hail south of the city of West Allis.				
MARQUETTE COUNTY --- 5.0 S MONTELLO [43.73, -89.32]				
	09/06/10 08:12 CST		0	Hail (0.75 in)
	09/06/10 08:12 CST		0	Source: Trained Spotter
Early-morning, elevated thunderstorms developed on the nose of a 40-45 knot 850 mb jet under an expansive area of upper level divergence that aided the mid-level warm air advection. The thunderstorms developed to the north of a surface warm front that stretched across Iowa into northern Illinois, as the strong low level jet impinged on this front. The elevated thunderstorms produced showers of pea to dime-sized hail, with larger stones ranging from 1 inch to 1.75 inches in diameter.				
(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/07/10 09:00 CST	1	80K	Strong Wind (MAX 48 kt)
	09/07/10 17:00 CST		0	
Direct Fatalities: M80OU				
A closed mid to upper-level low tracking across the northern U.S. took an associated surface low from the Dakotas, to Lake Superior and into southern Canada. The tight pressure gradient around this system produced strong winds across southern Wisconsin during the day. Wind gusts reached 40 to 50 mph (35 to 44 knots) in many locations. An 80 year-old Wauwatosa (Milwaukee County) man was killed in his back yard when a tree limb, estimated to weigh 1000 pounds, struck him after being blown down by the strong winds. The limb knocked the man's garage off its foundation. The highest measured wind gust reported in southern Wisconsin was 55 mph (48 knots) measured just southeast of downtown Pewaukee in Waukesha County. There were scattered reports of downed power lines due to broken tree branches falling on wires.				
DANE COUNTY --- 4.0 SW CROSS PLAINS [43.08, -89.69], 1.0 ENE MONONA [43.08, -89.30]				
	09/18/10 02:35 CST		1M	Hail (2.00 in)
	09/18/10 02:55 CST		0	Source: Trained Spotter
Trained spotters reported a 1 to 2 mile-wide swath of damage from hail showers that extended from north of Dodgeville, near Cross Plains, to just east northeast of Monona, dissipating near Interstate 90. Hundreds of vehicles were damaged; many homes had siding, window and screen damage; many trees were stripped of their leaves.				
WAUKESHA COUNTY --- 1.1 ESE MARCY [43.10, -88.11]				
	09/18/10 04:15 CST		0.10M	Lightning
	09/18/10 04:15 CST		0	Source: Newspaper
Lightning struck a house in Brookfield causing a fire in the attic. The lightning strike blew holes in the chimney and the roof of the house. Residents in the home at the time of the strike had escaped by the time firefighters arrived on the scene.				
A strong cold front was slowly sagging through southern Wisconsin during the early morning hours of September 18th. Mid-level warm advection and frontogenesis ahead of a short wave moving through the region created forcing and elevated instability, as well as strong effective deep layer shear of 40 to 50 knots, that generated elevated thunderstorms behind the surface cold front. The thunderstorms produced hail showers, turning the ground white, with hail stones up to 1 inch in diameter.				
GREEN COUNTY --- 5.0 SW BROADHEAD [42.57, -89.44], 4.3 S BROADHEAD [42.56, -89.35]				
	09/21/10 15:00 CST		0	Hail (1.00 in)
	09/21/10 15:08 CST		0	Source: Public
ROCK COUNTY --- 1.0 NNE PRAIRIE AIRPORT [42.56, -89.01], 1.3 NE PRAIRIE AIRPORT [42.56, -89.00]				

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	09/21/10 15:00 CST		1K	Tornado (EF0, L: 0.42 mi , W: 30 yd)
	09/21/10 15:01 CST		0	Source: Amateur Radio
An isolated thunderstorm cell ahead of a broken line of strong to severe thunderstorms, generated a brief, weak tornado. A damage survey conducted by Midwest Severe Storm Tracking and Response Center verified this brief, EF0 tornado around 4.2 miles southeast of Southern Wisconsin Regional Airport (KJVL). The tornado path began just southeast of the intersection of CTH G and Walton Lane, and moved east-northeast less than 1/2 mile before dissipating east of Franklin Street. The tornado broke off 6 to 8 inch tree limbs and twisted and broke off shrubs at the ground. It also bent, and then knocked over, a 20-foot antenna that had been stabilized by guy wires. The EF rating was determined by DI27 (TH) DOD2, with estimated wind speeds of 70 to 75 mph. The exact start location is Lat. 42.56200 Lon. -89.01098. The exact end location is Lat 42.56322 Lon -89.00297. Average path width was 15 yards. The damage amount was estimated.				
ROCK COUNTY --- 3.0 N BELOIT [42.56, -89.03]				
	09/21/10 15:25 CST		0	Thunderstorm Wind (EG 52 kt)
	09/21/10 15:25 CST		0	Source: Law Enforcement
Law enforcement officials reported several trees were blown down by thunderstorm wind gusts estimated at 52 knots (60 mph).				
ROCK COUNTY --- (JVL)ROCK CO ARPT JA [42.62, -89.03]				
	09/21/10 15:30 CST		0	Hail (0.75 in)
	09/21/10 15:30 CST		0	Source: Law Enforcement
ROCK COUNTY --- 5.0 N BELOIT [42.59, -89.03]				
	09/21/10 15:34 CST		0	Hail (0.75 in)
	09/21/10 15:34 CST		0	Source: Law Enforcement
WALWORTH COUNTY --- ALLEN GROVE [42.58, -88.77]				
	09/21/10 15:50 CST		0	Hail (1.00 in)
	09/21/10 15:50 CST		0	Source: Law Enforcement
WALWORTH COUNTY --- DARIEN [42.60, -88.70]				
	09/21/10 15:57 CST		0	Hail (0.88 in)
	09/21/10 15:57 CST		0	Source: Amateur Radio
WALWORTH COUNTY --- 2.0 WSW DELAVAN LAKE [42.64, -88.64]				
	09/21/10 15:58 CST		0	Hail (0.88 in)
	09/21/10 15:58 CST		0	Source: Trained Spotter
WALWORTH COUNTY --- 2.0 NNE EAST TROY [42.81, -88.38]				
	09/21/10 16:09 CST		0	Hail (1.00 in)
	09/21/10 16:09 CST		0	Source: Trained Spotter
RACINE COUNTY --- ROCHESTER [42.73, -88.22]				
	09/21/10 16:32 CST		0	Hail (0.75 in)
	09/21/10 16:32 CST		0	Source: Law Enforcement
MILWAUKEE COUNTY --- 1.0 SE FRANKLIN [42.86, -88.07]				
	09/21/10 16:33 CST		0	Hail (1.00 in)
	09/21/10 16:33 CST		0	Source: Amateur Radio
KENOSHA COUNTY --- BRISTOL [42.55, -88.05]				
	09/21/10 16:40 CST		0	Hail (1.75 in)
	09/21/10 16:40 CST		0	Source: Law Enforcement
RACINE COUNTY --- 2.0 SSE WIND LAKE [42.80, -88.13]				
	09/21/10 16:40 CST		0	Thunderstorm Wind (EG 52 kt)
	09/21/10 16:40 CST		0	Source: Law Enforcement

Law enforcement reported a thunderstorm wind gust estimated at 52 knots (60 mph).

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
RACINE COUNTY --- 4.0 W CALEDONIA [42.80, -88.01]				
	09/21/10 16:45 CST		0	Thunderstorm Wind (EG 52 kt)
	09/21/10 16:45 CST		0	Source: Law Enforcement
An amateur radio operator reported a thunderstorm wind gust estimated at 52 knots (60 mph).				
RACINE COUNTY --- 4.0 W CALEDONIA [42.80, -88.01]				
	09/21/10 16:47 CST		0	Hail (1.00 in)
	09/21/10 16:47 CST		0	Source: Law Enforcement
KENOSHA COUNTY --- 2.0 SSW SILVER LAKE [42.52, -88.19]				
	09/21/10 17:02 CST		0	Thunderstorm Wind (EG 52 kt)
	09/21/10 17:02 CST		0	Source: Law Enforcement
Law enforcement officials reported several trees were blown down by thunderstorm wind gusts estimated at 52 knots (60 mph).				
A cold front moving through the region was the focus for development of a broken line of thunderstorms ahead of the front during the afternoon and evening. The combination of ascent with a short wave impulse passing over the region, daytime heating, low-level moisture inflow on a 40 knot west southwest low-level jet, and steep low to mid-level lapse rates produced severe thunderstorms with large hail and damaging wind gusts. Additionally, the storms produced a brief, EF0 tornado in Rock County, southeast of Janesville.				
(WI-Z066) MILWAUKEE, (WI-Z071) RACINE				
	09/24/10 01:00 CST		10K	Strong Wind (MAX 47 kt)
	09/24/10 05:00 CST		0	
A tight pressure gradient set up over Wisconsin as strong low pressure, located over western Nebraska on the morning of September 23rd, moved northeast to central Lake Superior on the morning of September 24th. Scattered showers that formed ahead of a trailing cold front in the early morning hours transferred momentum down to the surface from a 50 to 55 knot low level jet, located between 1,000 feet and 2,000 feet above ground level. This produced southwest wind gusts between 39 and 48 knots (45 mph and 55 mph) at a few locations in far Southeast Wisconsin. There were scattered reports of downed power lines due to broken tree branches falling on wires.				
(WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z068) GREEN, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/24/10 11:00 CST		13K	Strong Wind (MAX 42 kt)
	09/24/10 16:00 CST		0	
A strong surface pressure gradient around a departing deep low pressure system moving from central Lake Superior to southwest Quebec, Canada produced westerly wind gusts between 39 and 43 knots (45 and 50 mph) during the afternoon hours, mainly over Southeast Wisconsin. There were scattered reports of downed power lines due to broken tree branches falling on wires.				
COLUMBIA COUNTY --- 0.2 SSW WISCONSIN DELLS [43.63, -89.77], 0.5 NNE PORTAGE [43.56, -89.45], 2.9 SSE PORTAGE [43.51, -89.43], 2.0 S WISCONSIN DELLS [43.60, -89.76]				
	09/24/10 18:00 CST		1.23M	Flood (due to Heavy Rain)
	09/30/10 05:00 CST		0.20M	Source: Official NWS Observations
The river at the gage in Portage was in flood from the evening of September 24th through the morning of September 30th, and reached a record flood level of 20.66 feet during the evening of Monday, September 27th. The old record crest at Portage was 20.50 feet on 09/14/1938. The flood waters threatened to break through a century-old earthen dike in the Civil Township of Caledonia. The waters seeped through the dike, but the dike did not fail. The potential levee failures caused voluntary evacuations and road closures along the river from the Dells to Portage. As it turned out, dozens of homes in the Blackhawk Park area just southeast of Portage were cut off when water depths reached a foot on the only road into the area. The Columbia County Emergency Management Director provided the following loss estimates: \$1 M for seasonal and full-time residential homes, \$100,000 for patching and reinforcing part of a 14-mile earthen berm/dike, \$50,000 for gravel shoulder washouts, \$75,000 to a wastewater treatment plant, and \$200,000 to bottomland crops. It was postulated that damage was limited due to the fact that the flood waters rose slowly which reduced the erosional power of water. The EM Director also noted that the Wisconsin River levels in Portage were about a foot higher than that experienced in the Great Flood of 1993, while at Wisconsin Dells the 2010 level was about a foot lower than that experienced in 1993.				
Even though heavy rains didn't fall in the surrounding area, record river levels occurred on the Wisconsin River near Portage. A potent, early-fall, storm brought waves of heavy rain to western and central Wisconsin, well upstream from Portage, beginning late on Wednesday, September 22nd and continuing into early Friday, September 24th. Two-day rainfall totals of 4 to 8 inches across the Wisconsin River basin over those parts of Wisconsin resulted in flooding in the river basin from Sauk County near the Wisconsin Dells downstream through Columbia County.				

Storm Data and Unusual Weather Phenomena - September 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Storm Data and Unusual Weather Phenomena - October 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
PT WASHINGTON TO NORTH PT LT WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87]				
	10/26/10 06:18 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	10/26/10 06:18 CST		0	Source: C-MAN Station
Frequent gusts of 32 to 36kts from 615 am CST to 815 am CST, with peak wind gust of 38kts at 618 am CST.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	10/26/10 06:50 CST		0	Marine Thunderstorm Wind (MG 48 kt)
	10/26/10 06:50 CST		0	Source: C-MAN Station
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	10/26/10 06:56 CST		0	Marine Thunderstorm Wind (MG 41 kt)
	10/26/10 06:56 CST		0	Source: C-MAN Station
Prevailing winds of 31 to 35 kts from 515 am CST to 715 am CST, with peak gust of 41 kts at 656 am CST.				
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	10/26/10 07:45 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	10/26/10 08:15 CST		0	Source: C-MAN Station
Frequent gusts to 38kts from 745 am CST to 815 am CST.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	10/26/10 08:10 CST		0	Marine Thunderstorm Wind (MG 48 kt)
	10/26/10 08:10 CST		0	Source: C-MAN Station
Frequent gusts 35 to 40kts from 710 am CST to 815 am CST, with peak gust to 48kts at 810 am CST.				
A strong cold front associated with strengthening low pressure over Minnesota swept across the nearshore waters of Lake Michigan during the morning hours. Strong gusty winds accompanied the thunderstorms.				
WISCONSIN, Southeast				
ROCK COUNTY --- DOWNTOWN JANESVILLE [42.68, -89.02], 2.0 E JOHNSTOWN CENTER [42.70, -88.79]				
	10/26/10 05:07 CST		0	Thunderstorm Wind (EG 65 kt)
	10/26/10 05:15 CST		0	Source: Law Enforcement
County sheriff deputies reported numerous trees blown down by thunderstorm wind gusts estimated up to 65 knots (75 mph). Construction barrels were scattered along Interstate 90.				
JEFFERSON COUNTY --- HELENVILLE [43.02, -88.70]				
	10/26/10 05:30 CST		15K	Thunderstorm Wind (EG 65 kt)
	10/26/10 05:30 CST		0	Source: NWS Employee
An NWS employee reported multiple homes with roof shingle damage from thunderstorm wind gusts estimated up to 65 knots (75 mph).				
ROCK COUNTY --- 3.0 NE BELOIT [42.55, -88.99]				
	10/26/10 05:35 CST		5K	Thunderstorm Wind (EG 65 kt)
	10/26/10 05:35 CST		0	Source: Trained Spotter
A trained spotter reported sections of a partially destroyed billboard entangled in power lines at the intersection of Milwaukee Road and Freeman Parkway by thunderstorm wind gusts estimated up to 65 knots (75 mph).				
JEFFERSON COUNTY --- 3.0 W LAKE MILLS [43.08, -88.96], LAKE MILLS [43.08, -88.90]				
	10/26/10 05:40 CST		20K	Thunderstorm Wind (EG 65 kt)
	10/26/10 05:45 CST		0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - October 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Law enforcement officials reported numerous trees and power lines blown down by thunderstorm wind gusts estimated up to 65 knots (75 mph) in the city of Lake Mills.				

KENOSHA COUNTY --- KENOSHA AIRPORT [42.60, -87.93]

10/26/10 06:46 CST	0	Thunderstorm Wind (MG 59 kt)
10/26/10 06:46 CST	0	Source: ASOS

The ASOS at the Kenosha airport recorded a thunderstorm wind gust of 59 knots (68 mph) with sustained winds of 43 knots (49 mph). Trees were reported blown down in the vicinity from the thunderstorm wind gusts.

KENOSHA COUNTY --- 1.0 N SOMERS [42.66, -87.90], 1.3 N SOMERS [42.67, -87.90]

10/26/10 06:47 CST	0.10M	Tornado (EF1, L: 0.43 mi , W: 100 yd)
10/26/10 06:48 CST	0	Source: NWS Storm Survey

An EF1 tornado developed about 0.95 mile north of Somers, about 2300 feet southwest of the intersection of County Highway KR (County Line Road) and County Highway EA (72nd Avenue). The tornado moved northeast just under one-half mile in Kenosha County before crossing into southern Racine County about 1.34 miles northeast of Somers at the intersection of CTH EA and County Line Rd. While in Kenosha County it destroyed a 6-vehicle garage and damaged a nearby home, trees, and power lines. The tornado path averaged 50 yards in width, with a maximum width of 100 yards. The EF-rating was based on DI 27(TH) DOD 4 with estimated wind speeds up to 100 mph. The exact start location is Lat 42.66377 Lon -87.89961. The exact end location on the Kenosha-Racine County line is Lat 42.66901 Lon -87.89515. Property damage values were estimated.

RACINE COUNTY --- 2.2 S STURTEVANT [42.67, -87.90], 1.4 WNW DOWNTOWN RACINE [42.73, -87.83]

10/26/10 06:48 CST	1M	Tornado (EF1, L: 5.40 mi , W: 100 yd)
10/26/10 06:53 CST	2	Source: NWS Storm Survey

An EF1 tornado that developed in far northern Kenosha County, northeast of Somers, entered Racine County near the intersection of County Highway KR (County Line Road) and 90th Street. After a path length of about 0.43 mile in Kenosha County, it crossed into Racine County where CTH EA (72nd Ave) intersects County Line Rd. The tornado moved northeast and dissipating in the northeast section of Graceland Cemetery on the west side of the City of Racine, about 500 feet west of Osborne Boulevard. In Racine County, the tornado blew a weakly anchored barn (built in the 1920s) off its foundation and damaged an industrial building south of STH 11. Later on, it tore off a 100'x200' roof section of the Case/New Holland building, damaged several HVAC units on the roof, and tore off some of the building's garage doors. The Case/New Holland plant was closed until Monday, November 1st while the roof was being repaired. Two workers in this plant were injured by the tornadoes effects. Additionally, a tractor and it's semi-trailer on the Case/New Holland site were blown over and damaged. wo other businesses on STH 11 reported roof damage. At least 3 homes sustained damage. State Highway 11 was closed for a time in eastern Racine County due to debris and fallen power lines, closing or disrupting business at stores along Highway 11, especially in the 7000 and 7100 blocks. At a church 2 miles northeast of the intersection of STH 11 and Oakes Rd., damage was inflicted to its roof, siding windows and a brick sign. Numerous trees and a few power lines were blown down or broken along the path of the tornado. At one point, about 2700 customers lost electrical power. There were reports of a couple vehicle accidents as drivers tried to avoid the tornado. The tornado path averaged 50 yards in width, with a maximum width of 100 yards. The EF-rating was based on DI 23 DOD 4 EXP103 with estimated wind speeds up to 105 mph. The exact start location in Racine County is Lat 42.66901 Lon -87.89515. The exact end location is Lat 42.72845 Lon -87.82596. The path of the tornado was not a straight line, rather, a rough curved line with an actual path length of 5.92 miles within Racine County. After crossing STH 11 about 1/10 of a mile east of North Branch Pike River, the tornado path bearing changed from NNE to NE. Property damage values are estimated.

An intensifying 50 to 70 knot low-level jet ahead of an intense negatively-tilted upper level trough over the Plains transported low-level moisture and instability into southern Wisconsin during the early morning hours of October 26th. Overall forcing for ascent increased as a vorticity maximum rounded the base of the upper trough and lifted northeast across western Wisconsin. Severe thunderstorms developed ahead of a surface cold/occluded front that trailed from record surface low pressure over northern Minnesota. Strong shear profiles were supportive of rotating updrafts which produced damaging wind gusts and an EF1 tornado that moved from extreme northern Kenosha County into eastern Racine County. For additional related information go to this URL:
http://www.crh.noaa.gov/mkx/?n=102610_recordcyclone.

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Path of October 26, 2010 Racine County EF-1 tornado.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	10/26/10 06:00 CST	1.02M	High Wind (MAX 55 kt)
	10/27/10 18:00 CST	1	0

Long-duration, widespread, southwesterly high winds raked south-central and southeast Wisconsin for about 36 hours, resulting numerous reports of felled trees, broken tree branches, downed power-lines, and damage to structures and vehicles. All of this was generated by a record-breaking, low pressure system which tracked northeast from the Central Plains on Monday, October 25, and then rapidly deepened as it moved northeast across northern Minnesota on Tuesday, October 26. The surface low was being driven by a strong negatively-tilted 500 mb trough moving through the central U.S. A surface weather map at 600 PM October 26th is attached to the Dane County event. For additional on-line information go to this URL: http://www.crh.noaa.gov/mkx/?n=102610_recordcyclone.

This abnormally strong extra-tropical system broke the record for the lowest sea level pressures measured in the states of Wisconsin and Minnesota. The lowest pressure in Wisconsin occurred at Superior, in far northwest Wisconsin, measuring 961.3 millibars (28.39") at 11:15 AM CDT on the 26th. The previous lowest sea level pressure recorded in Wisconsin was 963.4 millibars (28.45") at Green Bay on April 3 of 1982. Madison had the second lowest sea level pressure reading on record at 975.3 millibars (28.80 inches of mercury), and Milwaukee had the seventh lowest reading on record at 978.7 millibars (28.90 inches of mercury).

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Severe thunderstorms formed along and ahead of a cold front surging eastward ahead of the low. An EF1 tornado formed in northern Kenosha County and tracked northeast across portions of central and eastern Racine County. There were also numerous reports of wind damage from severe thunderstorm winds. All of this severe weather activity is documented in tornado and thunderstorm wind events for October 26th. After the cold front passage, strong subsidence in the "dry slot" of the system produced gradient winds of 22 to 38 knots (25 to 45 mph), with measured gusts to 55 knots (63 mph). Based on severity of resultant damage, isolated maximum wind gusts may have been as high as 61-64 knots (70-75 mph), especially on ridge tops.

The slow-moving low kept the tight pressure gradient draped across south-central and southeast Wisconsin Wednesday, October 27th. Wind speeds slowed for a time Tuesday night as nocturnal cooling prevented mixing up to the strong winds within 3,000 feet of the ground. However, mixing after sunrise on the 27th tapped these stronger winds, with average mixed-layer winds around 50 knots. Winds at many locations were stronger on Wednesday than Tuesday; with sustained speeds of 26 to 39 knots (30 to 45 mph), and estimated gusts to 56 knots (65 mph). Rural Mutual Insurance reported claims from agricultural producers of one million dollars in damage to buildings and equipment from across all of Wisconsin. We Energies reported 20,000 customers in Southeast Wisconsin were without power at the peak of the power outages on Tuesday, October 26th.

Below is a county-by-county breakdown (all damage losses are estimated based on variety of sources):

Marquette Co. - Wind gusts blew down trees and power lines across the county.

Green Lake Co. - Wind gusts blew down trees and power lines across the county. A trained spotter in Berlin measured a 62 mph (54 knot) wind gust at 115 pm CDT on October 27th.

Fond du Lac Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Bryon measured a 60 mph (52 knot) wind gust at 4 pm CDT on October 27th. The maximum 2-minute wind speeds at the Fond du Lac Airport (KFLD) were 38 and 36 mph on the 26th and 27th, respectively.

Sheboygan Co. - Wind gusts blew down trees and power lines across the county. The Sheboygan C-MAN site in the Sheboygan harbor entrance measured a 62 mph (54 knot) wind gust at 1 pm CDT on October 26th. A mesonet site one mile north of downtown Sheboygan measured a 62 mph (54 knot) wind gust at 430 pm CDT on October 27th. The maximum 2-minute wind speeds at the Sheboygan County Airport (KSBM) were 44 and 46 mph on the 26th and 27th, respectively.

Sauk Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Baraboo measured a 60 mph (52 knot) wind gust at 1130 am CDT on October 27th. The maximum 2-minute wind speeds at the Lone Rock Airport (KLNR) were 35 and 38 mph on the 26th and 27th, respectively. Just east of Reedsburg, the metal roof of a church storage shed was ripped off. One of shed's support beams crashed through the roof of a the main church building.

Columbia Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Lodi measured a 59 mph (51 knot) wind gust at 330 pm CDT on October 27th and 50 knots (58 mph) on the 26th. Portage police responded to five wind-related calls, including two downed utility poles and a report of a fallen tree damaging two vehicles.

Dodge Co. - Wind gusts blew down trees and power lines across the county. The RAWs site at Horicon Marsh measured a 53 mph wind gust at a 20-foot height with conversion to the 33-foot standard would bring it to an estimated 61 mph (51 knots) at 101 pm CDT on October 27th. A 53 knot (61 mph) wind gust was measured at a location 5 miles west of Knowles on the 27th. The Dodge County emergency manager reported parts of roofs torn off a couple of pole barns east of Beaver Dam, as well as trees down and shingles blown away.

Washington Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Bear Valley measured a 62 mph (54 knot) wind gust at 430 pm CDT on October 27th.

Ozaukee Co. - Wind gusts blew down trees and power lines across the county due to wind gusts estimated at 58 mph (50 knots). A large maple tree fell on a portion of a home in Grafton on Wednesday, October 27th, destroying an awning over the front door of the home and damaging roof shingles on the home.

Iowa Co. - Wind gusts blew down trees and power lines across the county due to wind gusts estimated at 58 mph (50 knots). U.S. Highway 18-151 north of Dodgeville was closed from 7 am to 330 pm CDT on Tuesday, October 26th due to downed power lines at the intersection with State Highway 23. Also on the 26th, a large tree fell on a home on West Chapel Street in Dodgeville, severely damaging the roof.

Dane Co. - Wind gusts blew down trees and power lines across the county. A Department of Transportation highway sensor on STH 12 in Madison measured a 62 mph (54 knot) wind gust at 4 pm on October 26th. The wind sensor on top of the 15-story University of Wisconsin Atmospheric, Oceanic and Space Sciences Building in Madison measured a wind gust of 72 mph (63 knots) at 150 pm CDT on October 27th. A semi-trailer truck was rolled over by the winds, blocking the westbound lanes of U.S. Highway 151 in Sun Prairie on the 26th. A section of the rubber roof on top of the Westgate Mall was peeled back by the strong winds. A tree fell onto a house on Lakeland Ave. on the east side of Madison, and a tree limb damaged the roof of a house on Regent Street on the west side. A large burr

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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oak toppled in the strong winds damaged a barn on the grounds of the Sterling North museum in Edgerton on the 27th. Even in a sheltered, residential area 5 miles southwest of Downtown Madison, an observer measured wind gusts to 44 knots (51 mph) at 554 pm CDT on the 27th! At this same location, 1.11" of rain fell on the 26th and a total of 1.54" on Oct 23-24th. It is possible that the wet surface soils were softened by the rains, making it easier for the high winds to knock down trees. The maximum 2-minute wind speeds at the Dane County Regional Airport (KMSN) were 30 and 28 mph on the 26th and 27th, respectively.

Jefferson Co. - Wind gusts blew down trees and power lines across the county from wind gusts estimated at 58 mph (50 knots).

Waukesha Co. - Wind gusts blew down trees and power lines across the county from wind gusts estimated up to 60 mph (52 knots). We Energies reported about 1700 customers without power, mainly in the Oconomowoc and Nashota areas at 9 am CDT on October 26th. A large window was blown out at a sporting goods store in Pewaukee. The county mental health center, the Huber Facility, the county communications center and the county highway shop went to emergency back-up power due to the power outages. The high winds snapped a flag pole at its base at the Hawks Inn Historical Museum in Delafield. in the city of Waukesha a toppled tree damaged a home. At the Waukesha Airport (Crites Field) the high winds destroyed part of a roof of a hangar and damaged a door of an adjacent hanger.

Milwaukee Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Brown Deer measured wind gust of 63 mph (54 knots) at 430 pm on October 27th. The maximum 2-minute wind speeds at the Milwaukee Airport (KMKE) were 44 and 43 mph on the 26th and 27th, respectively. The strong gusts peeled off exterior wall bricks on two buildings north of downtown Milwaukee along the Milwaukee River. The City of Milwaukee Department of Public Works received 45 calls about broken tree branches, a half dozen reports of minor damage and traffic signals out at a dozen intersections.

Lafayette Co. - Wind gusts blew down trees and power lines across the county from wind gusts estimated up to 58 mph (50 knots).

Green Co. -Wind gusts blew down trees and power lines across the county. A mesonet site in New Glarus measured a wind gust of 62 mph (54 knots) at 340 pm CDT on the 27th.

Rock Co. - Wind gusts, estimated up to 58 mph (50 knots) blew down trees and power lines across the county. A man in Janesville was injured when he was struck by a wind-blown object, possibly a garbage can lid. He was knocked into his outdoor grill, and received hospital treatment. School was canceled and students sent home from Janesville Parker High School when portion of the roof was peeled back by the strong winds (estimated repair of \$215,000). A garage roof was damaged in Janesville by a large oak limb punching a hole in the roof, and a power pole and power line were downed by the winds near the intersection of Center Ave. and Joliet St. southwest of downtown Janesville. A massive burr oak tree in Edgerton was blown over and smashed part of roof of a barn on the grounds of the Sterling North museum.

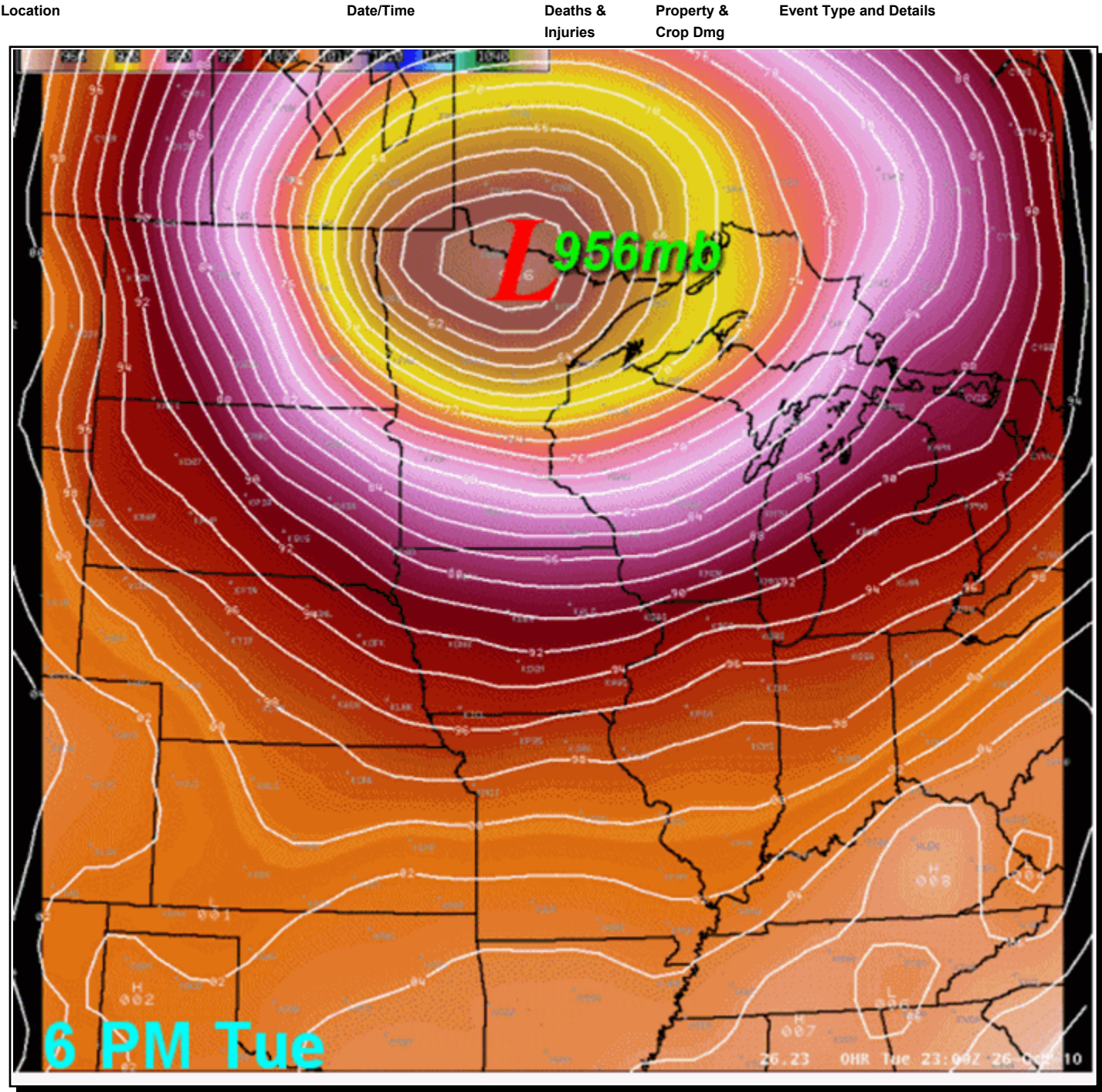
Walworth Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in Elkhorn recorded a 59 mph (51 knot) wind gust at 3 pm CDT on October 27th. Wind-driven rain leaked through the large windows of the atrium at East Troy High School.

Racine Co. - Wind gusts blew down trees and power lines across the county. A mesonet site in the city of Racine reported a 63 mph (55 knot) wind gust at 3 pm CDT on October 27th. The maximum 2-minute wind speeds at the Racine Airport (KRAC) were 36 and 37 mph on the 26th and 27th, respectively. About 4,000 customers in the county were without power. In the city of Racine, embers blown out of a portable fire pit ignited a nearby shed and a neighboring garage on Glendale Ave. Both the garage and the shed were destroyed. Gilmore Middle School and Wadewitz Elementary School dismissed students for the day around 11 am on Tuesday, October 26th because of power outages at both schools.

Kenosha Co. - Wind gusts blew down trees and power lines across the county, including some road signs. The ASOS at Kenosha County Airport reported a 58 mph (50 knot) wind gust at 344 pm CDT on October 27th. The maximum 2-minute wind speeds at the Kenosha County Airport (KENW) were 49 and 46 mph on the 26th and 27th, respectively. About 1,700 customers lost power when strong winds snapped four utility poles and downed power lines along County Highway KR in Somers. A garage was leveled by the strong winds in the 200 block of 72nd Avenue in Kenosha.

Lake Michigan waters - a buoy in the nearshore waters of Lake Michigan just east of the city of Racine recorded a 12-foot wave on the 26th and 9-foot wave on the 27th. A buoy east of Washington Island (Door Co.) in the middle of Lake Michigan recorded a 21.7 foot wave on the 26th.

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Surface isobaric map of Midwest at 1700 CST (600 PM CDT) October 26, 2010. Note the tight isobaric gradient which generates widespread, strong to high winds. Red "L" denotes position of central low pressure.

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WISCONSIN, Southeast				
DANE COUNTY --- CROSS PLAINS [43.12, -89.63]				
	11/22/10 13:07 CST		0	Hail (0.75 in)
	11/22/10 13:07 CST		0	Source: Trained Spotter
DODGE COUNTY --- 3.0 W BEAVER DAM [43.47, -88.89]				
	11/22/10 15:10 CST		0	Hail (0.75 in)
	11/22/10 15:10 CST		0	Source: Trained Spotter
WALWORTH COUNTY --- 2.9 SSE WALWORTH [42.50, -88.57], 1.0 N ZENDA [42.53, -88.48]				
	11/22/10 15:32 CST		1M	Tornado (EF1, L: 5.33 mi , W: 100 yd)
	11/22/10 15:37 CST		0	Source: Emergency Manager
<p>A tornado moved into extreme south-central Walworth County from Illinois about 5,100 feet west of the intersection of Alden Road and State Line Road, and quickly intensified to EF-1 rating. It moved northeast for over 5 miles before dissipating about 1,700 feet southeast of the intersection of County Road BB and Zenda Road. Five homes sustained damage, with two homes severely damaged. The tornado crossed CTH B where it dog-legs east of Swamp Angel Rd. Collectively, three sheds and two barns were damaged, with one of the barns flattened. Eight wooden power poles were also snapped, along with numerous trees and fences. On one farm, 4 cows, and several chickens and turkeys were killed by tornado debris. WeEnergy Utility reported about 4000 homes without electrical power in the county due to downed power-lines. The average path length was 60 yards in width. The EF1 estimated wind speed of 105 mph was based on DI 2(FR12) DOD 4. The loss estimate was produced by Walworth County Emergency Management. The exact start location is Lat 42.49507 Lon -88.56948. The exact end location is Lat 42.53464 Lon -88.47970.</p>				
FOND DU LAC COUNTY --- 1.0 SW FOND DU LAC AIRPORT [43.76, -88.50]				
	11/22/10 15:35 CST		0	Hail (0.75 in)
	11/22/10 15:35 CST		0	Source: Trained Spotter
<p>A trained spotter reported 3/4 inch hail. The consistency of the hail was mushy and soft.</p>				
KENOSHA COUNTY --- 2.3 NNE BRIGHTON [42.66, -88.09], 3.0 NNW PARIS [42.67, -88.07]				
	11/22/10 16:01 CST		2K	Tornado (EF0, L: 0.87 mi , W: 125 yd)
	11/22/10 16:02 CST		0	Source: NWS Storm Survey
<p>An EF0 tornado developed north of Brighton, about 1/2 mile southwest of the intersection of County Line Road and 224th Avenue. This tornado moved northeast into southern Racine County across County Line Road, about 1,700 feet to the east of the intersection with 224th Avenue, and quickly intensified to EF-1 rating. A pole shed sustained minor roof and siding damage. Otherwise, damage was limited to mainly trees along the slightly more than 3/4 mile long path that averaged 75 yards wide. The EF0 estimated wind speed of 80 to 85 mph was based on DI 28(TS) DOD 4. The exact start location is Lat 42.66253 Lon -88.08841. The exact end location is Lat 42.66995 Lon -88.07447.</p>				
RACINE COUNTY --- 1.4 WSW UNION GROVE [42.67, -88.07], 1.0 ENE FRANKSVILLE [42.76, -87.90]				
	11/22/10 16:02 CST		5M	Tornado (EF1, L: 10.57 mi , W: 150 yd)
	11/22/10 16:15 CST		0	Source: Law Enforcement

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>This tornado is a continuation of a segment that started in Kenosha County. It quickly intensified to an EF-1 rating after moving into Racine County. It moved into southern Racine County about 2.3 miles southwest of Union Grove, around 1,700 feet to the east of the intersection of County Line Road and 224th Avenue. The tornado moved northeast before dissipating near the intersection of County Highway K and County Highway H, about 1/2 mile southeast of Franksville. There were no fatalities, but 2 people were injured in storm-related vehicle accidents. Newspaper articles indicated they were hospitalized. Union Grove bore the brunt of the damage. Eleven buildings, fencing, and trees were damaged on the Racine County Fairgrounds. Large oak trees in Old Settler's Park, which is the northwest corner of the Racine County Fairgrounds, were hit hard. Across the street (STH 11), two businesses had large pieces of roof covering peeled off. One of these, Grove Gear, had about 10,000 square feet of it's roof ripped off, which allowed rain to damage the inside offices and equipment. Newspaper articles indicated that damage to Grove Gear alone was about \$1.4 Million. Two other businesses also had roof and siding damage. A residential-care facility had several of its buildings damaged. Around 100 homes in the Village of Union Grove sustained light to moderate damage to roofs, windows, and/or siding, and numerous trees were either uprooted or had large branches broken or snapped. Numerous gas leaks in and around Union Grove were reported. Only one home was extensively damaged and had to be demolished. A semi-trailer truck overturned on Interstate 94 near State Highway 20, blocking the northbound lanes, as the tornado crossed the interstate. Another semi-trailer was blown over on eastbound Highway 20 near the west frontage road next to the interstate. A number of campers were overturned and one was destroyed at the Burlington RV store at the intersection of STH 20 and Interstate-94. WeEnergy Utility estimated that 3200 customers lost electrical power in Racine County. The path of the tornado averaged 75 yards in width. A detailed examination of the tornado path suggests that this tornado consisted of three or four individual vortices, with one taking over as the previous one dissipated. Each vortex had it own path, which resulted in segmented-appearance of the tornado path as shown in the associated image attached to this severe weather episode. Although the header strip for this tornado event indicates a path length of 10.57 miles, a manual map measurement value of 10.67 miles was obtained. The total loss estimate of \$5M was received from Racine County Emergency Management. The EF1 estimated wind speed of 105 mph was based on DI 21(MBS) DOD 3. The exact start location is Lat 42.66995 Lon -88.07447. The exact end location is Lat 42.75586 Lon -87.90231.</p>				

An out-of-season round of strong to severe, surface-based, thunderstorms developed in Southeast Wisconsin during the mid-afternoon of November 22nd, which resulted in two tornadoes. This severe weather was related to low pressure lifting northeast from southwestern to central Wisconsin which brought a warm front up into southern Wisconsin. Afternoon temperatures peaked in the lower to mid 60s in the counties of Walworth, Racine, and Kenosha, with dewpoints reaching the mid to upper 50s. Instability with the unseasonable warmth just south of the warm front, with surface based CAPE values between 500 J/kg to 1000 J/kg, allowed for the thunderstorm development. Strong lift associated with the right entrance region of a 50 to 60 knot mid-level jet, strong deep layer shear and steep mid level lapse rates allowed super-cell thunderstorms with rotating updrafts to fire up along and ahead of a cold front trailing south of the low. Strong low-level shear developed just south of the warm front which led to one tornado in Walworth County and the other from far northern Kenosha County into southern Racine County around Union Grove. About 3,000 customers lost electric power due to the tornadoes and accompanying thunderstorms.

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Map plots of the two EF-1 tornadoes that occurred in southeast Wisconsin on November 22, 2010. The picture insert on the lower plot shows roof damage to a business on STH 11 on the west side of the city of Union Grove.